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NEW EQUIPMENT DIGEST

May, 1955
Volume 20—Number 5

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CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

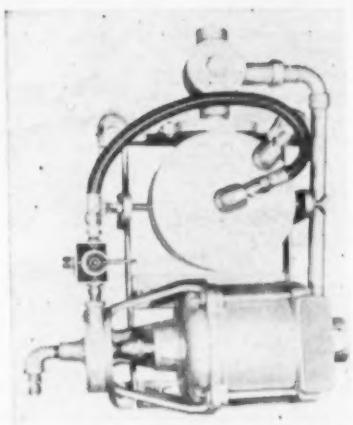
EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

REPRODUCTION PROCESS
makes eight permanent copies

Single exposure is required to make eight permanent copies of anything written, printed, typed or drawn with the model D XeroX processor. A few minutes is required to make copies on plain or card stock or any other type of paper. Processor will prepare either an offset paper master for runoff of multiple copies on an offset duplicator, or a translucent intermediate to be used in diazo type machines. Original copy may be opaque, translucent or two-sided. With the XeroX No. 4 camera, copy may be reduced or enlarged within the limits of 8½ x 13 in. Processor makes copies by Xerography, a dry electrostatic process. Made by **Haloid Co.**, 556 Haloid St., Rochester 3, N. Y.

▲ For more details circle **NED-1 E5** on enclosed inquiry slip ▲

SPRAY PAINT HEATER
uses coilless heat exchanger

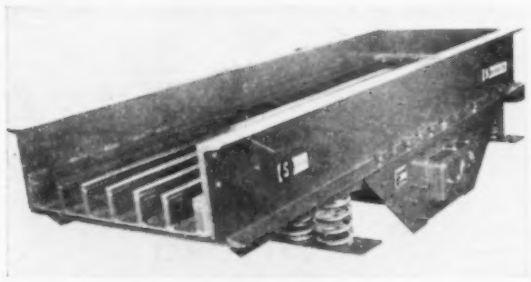


Standard industrial finishes can be applied with excellent coverage with this coiless Circaflo 300 hot paint spray heater. Uniform viscosity and controlled temperature are assured. Improved pump is equipped with ¼-hp explosionproof electric motor. One coat of heat-reduced high-solids film replaces two coats of conventional finish when this unit is used. Made by **Spee-Flo Corp.**, Dept. NED, 720 Polk Ave., Houston 2, Tex.

▲ For more details circle **NED-2 E5** on enclosed inquiry slip ▲

OSCILLATING FEEDER
combines scalping, feeding actions

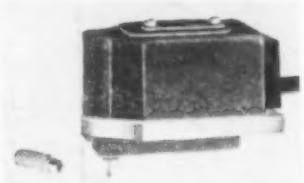
Dual operations of apron feeder and stationary grizzly are combined in this oscillating feeder. Feeder is available in sizes from 2 x 8 ft to 6 x 12 ft and in



capacities up to 1000 tons per hour. Double shaft assembly allows unit to feed on the horizontal when headroom is at minimum. These twin shafts can be easily timed to vary angle of throw. Construction of grizzly deck allows use of abrasion-resisting alloys, and wear surfaces can have replaceable liners. Feeder can be either spring mounted as shown or mounted with spring and cable suspension arrangement. Made by **Simplicity Engineering Co.**, Durand 15, Mich.

▲ For more details circle **NED-3 E5** on enclosed inquiry slip ▲

HAND-HELD VIBRATION PICKUP
for exploratory vibration detection



Extremely sensitive probe of this type 115 hand-held vibration pickup enables it to be used to explore surfaces, bearings and lightweight objects and detect vibration accurately for analysis and measurement. Signal picked up by probe is generally run through leads to a vibration meter, recorder, spectrum analyzer or other instrument. Magnitude of vibration is easily determined. Made by **MB Mfg. Co.**, 1066 State St., New Haven 11, Conn.

▲ For more details circle **NED-4 E5** on enclosed inquiry slip ▲

PNEUMATIC-TIRED CASTERS
afford minimum of load jar

P-R series of pneumatic-tired heavy-duty casters for floor trucks is intended for use where heavy loads, fragile merchandise and similar cargoes must be transported with minimum load jar. Four-ply tires have separate inner tubes and provide protection for floor surfaces as well. Wheels are equipped with roller bearings. Both rigid and swivel models, with choice of three wheel sizes in each model are available. Tire sizes are 8 x 3.00/4, 10 x 3.50/4 and 12 x 4.00/6. Made by **Hamilton Caster & Mfg. Co.**, 1668 Dixie Highway, Hamilton, O.

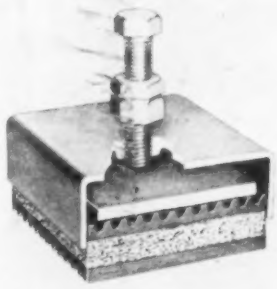
▲ For more details circle **NED-5 E5** on enclosed inquiry slip ▲

TARNISH PREVENTIVE
protects silver and silver plating

Developed for packaging silver and silver-plated products, Nox-Tarnish paper prevents tarnish. Chemicals impregnated in paper neutralize atmospheric sulfides and prevent their action on silver. Paper is suited for protection of silver or plated holloware, flatware, trophies, jewelry, bearings and, particularly, electrical and electronic components in storage or between processing operations. Made by **Daubert Chemical Co.**, Protective Packaging Div., Dept. NED, 333 N. Michigan Ave., Chicago 1, Ill.

▲ For more details circle **NED-6 E5** on enclosed inquiry slip ▲

VIBRATION DAMPER
permits leveling without shims



Lev - Elasto adjustable leveling mount dampens vibration and isolates shock, yet does not require anchor bolts and shims. Easily and quickly installed on machinery, it can be picked up with the machine and reused. Machines mounted on it will not "walk." Elasto-Rib isolating medium of cork and neoprene will not pack down or deteriorate due to action of oil or chemicals. Sizes for various loading conditions are available with ⅝-in. adjustment. Made by **Korfund Co.**, 48-19H 32nd Pl., Long Island City 1, N. Y.

▲ For more details circle **NED-7 E5** on enclosed inquiry slip ▲

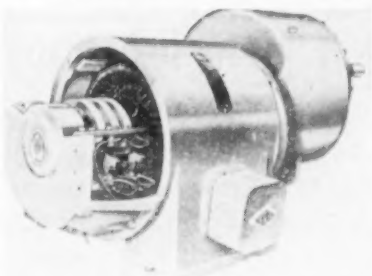
STATIC SWITCHING CIRCUITS
controls have no moving parts

Developed as replacements for relay systems, Cypak systems are static switching circuits for industrial control applications. Because systems contain no moving parts, they virtually never wear out. Essentially digital in nature, systems utilize solid-state components such as transistors and magnetic amplifiers flexibly arranged to perform "and", "or", "not" and "time" functions. All machine or process operations can be reduced to a combination of these functions.

Systems have been applied to such equipment as punch presses (illustrated), welders, mills and paper machines. Speed of operation ranges from 10 to 100 times faster than conventional switching systems. To operate these systems, control circuits of 18 v are adequate for all conditions. Magnetic on-off push-buttons and limit switches, which use no contacts, have been developed for use with the Cypak system. Systems and components are not yet in commercial production. Full information available from **Westinghouse Electric Corp.**, Box 2099, Pittsburgh 30, Pa.

▲ For more details circle **NED-8 E5** on enclosed inquiry slip ▲

MOTORIZED SPEED REDUCER
provides variable speed reduction



Variable speed reduction and high starting torque on low starting current are features of this slip ring Motoreducer. The offset shaft of this drive unit can be hooked up at 3, 6, 9 and 12-o'clock positions to afford space savings when used in close quarters. Motors are available in ratings of ½ to 5 hp in speed reductions of 520 to 16 rpm. Drive motor can be drip-proof or totally enclosed. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

▲ For more details circle **NED-9 E5** on enclosed inquiry slip ▲

SAFETY HOOK
gate locks on lifting load

A load cannot be lifted by this Newco safety hook without its gate or yoke locking automatically. To open, hook must be manually pressed against a compression spring. Drop-forged hook is standard strength, while yoke or gate is manganese bronze alloy (110,000 psi) and prevents hook from spreading when overloaded. Smooth design allows full throat opening and keeps hook from catching on projections or ledges. Made by **Newman Mfg. & Sales Corp.**, Dept. 125, P. O. Box 5939, Kansas City 11, Mo.

▲ For more details circle **NED-10 E5** on enclosed inquiry slip ▲

with PLASTIC ROCK!

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-resistant wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries, institutions and railroads.

ASK FOR REPORT 220-N-5.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

For more details circle NED-11 E5 on enclosed inquiry slip

Your Inquiry Is Automated!

Automation is much in the news today and is hailed as a new concept in getting things done faster, better and cheaper. Over two years ago we recognized the need to "automate" our inquiry handling method. At that time, we announced that we had purchased over $130,000 worth of the latest types of business machines to process and forward the thousands of inquiries you send us.

This is a progress report. These complex, fully automatic machines are performing beyond our fondest hopes. Your inquiry is sent on to the manufacturer in an incredibly short time. We are proud of this service to our readers and to manufacturers of industrial equipment, products and materials. The self-mailing inquiry slip in this issue is a real shortcut to improved production in your plant. Why not use it?

A. N. Gregg
EDITOR

FIRE EXTINGUISHER has pressure range of 150 to 250 psi

UL-approved pressure range from 150 to 250 psi is featured by this 10-lb dry chemical fire extinguisher. Unit will successfully extinguish 40 sq ft gasoline fires when operated at any pressure within this range. It has a pistol-grip trigger release mechanism, and a dust and moistureproof gage which shows at a glance unit's charged pressure. Diffuser horn gives wide coverage of discharge pattern. Made by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

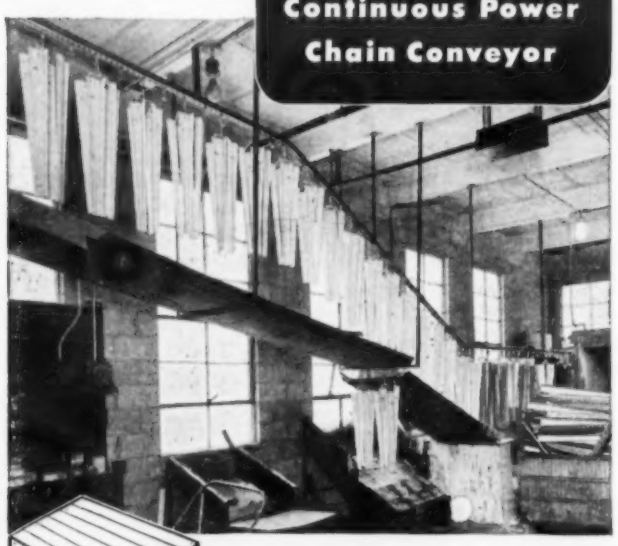
For more details circle NED-13 E5 on enclosed inquiry slip

Graphic Arts Films

Eastman Kodak Co.—Listed in tabular form in 48-page well-illustrated brochure are the photographic and physical characteristics of Kodak line of films, plates and papers for graphic arts use. Included for each are data on exposure indexes, safelight requirements, chemicals needed for processing and available package sizes. Also described are packaged chemicals, photolithography and photoengraving screens, film used in photo screen printing, process lens specifications and darkroom accessories.

For more details circle NED-14 E5 on enclosed inquiry slip

Introducing R-W "460" Continuous Power Chain Conveyor



a completely packaged conveyor for light loads!

Richards-Wilcox' new "460", the completely packaged conveyor, is especially adapted for handling jobs where the use of heavier installations is impractical. It combines unusual flexibility, versatility and safety with special economies due to lower load limits. And installation requires no special engineering . . . entire layout can be installed by plant personnel!

R-W "460" is shipped completely packaged from stock throughout the U. S. It is available up to 200 ft. maximum length *only*, with capacities of 8½ lbs. on 6 inch centers or 17 lbs. per lineal foot, and 200 lbs. draw bar pull. It is ideal as a supplementary conveyor unit in production lines and to help solve handling problems where the use of drying ovens, washers, paint sprayers, de-greasers and similar operations are involved.

For complete information write for descriptive catalog A-96.

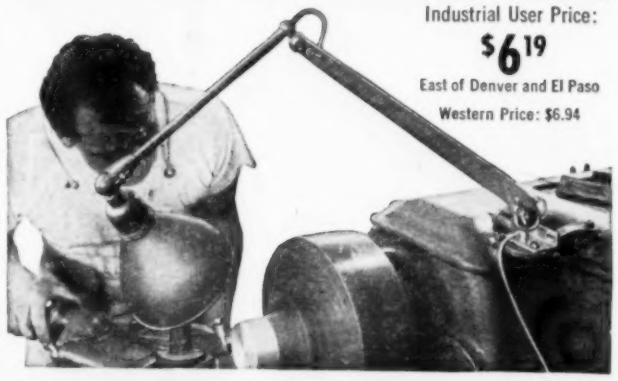
75 YEARS of QUALITY and SERVICE by RICHARDS-WILCOX AURORA, ILLINOIS

Richards-Wilcox Mfg. Co.
MATERIALS HANDLING DIVISION
Branches in Principal Cities
435 W. THIRD STREET, AURORA, ILLINOIS
SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT • INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS

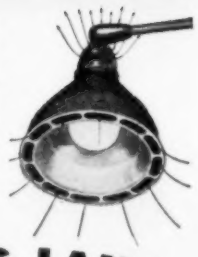
For more details circle NED-12 E5 on enclosed inquiry slip

New Adjustable-Arm Air-Cooled Dazors
Light Machines and Benches at Low Cost

Industrial User Price: $6.19
East of Denver and El Paso
Western Price: $6.94



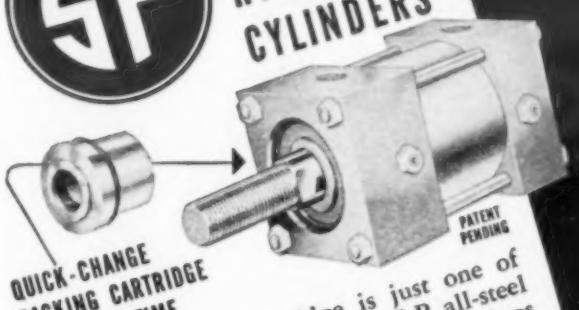
Get cool, efficient lighting with this new Dazor-quality fixture. Holds fast in any desired position, despite vibration or shock. Universal base. Top-mounted reflector shown above. Either 31" arm extension (No. 1100) or 20" (No. 1101). Gray baked enamel over bonderizing. Call your Dazor distributor. Dazor Manufacturing Corp., St. Louis 10, Missouri.



. . . Makers of
DAZOR FLOATING LAMPS

For more details circle NED-15 E5 on enclosed inquiry slip

SP AIR and HYDRAULIC CYLINDERS



QUICK-CHANGE PACKING CARTRIDGE CUTS DOWNTIME

Removable packing cartridge is just one of many modern design features of S-P all-steel cylinders. Made in a wide range of mountings and bore sizes. Prompt deliveries. Send for catalog on Hydraulic Cylinders or Standard Air Cylinders or Heavy-Duty Air Cylinders. The S-P Manufacturing Corp., 12415 Euclid Avenue, Cleveland 6, Ohio.

SEND FOR Catalog

THE S-P MFG. CORP.—Cleveland
A Bassett Company
PRECISION PRODUCTS SINCE 1916
AIR AND HYDRAULIC CYLINDERS • POWER CHUCKS • ROTATING CYLINDERS
COLLET AND DRILL PRESS CHUCKS • AIR PISTONS, VALVES AND ACCESSORIES

For more details circle NED-16 E5 on enclosed inquiry slip

Save time and money—
BROWNING ROLLER CHAIN DRIVES

. . . using Browning's famous interchangeable bushing system

For quality and economy, specify Browning's smooth running roller chain and precision sprockets with simplified split taper compression bushing. Browning's unbreakable bushing mounts quickly, easily—saves shop time, lowers costs. Also used in Browning couplings, paper pulleys, sheaves; standardizes plant on one-type bushing.

Send for FREE NEW CATALOG
52 pages of engineering data on Browning Roller Chain Drives. Ask for catalog CD-102.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

For more details circle NED-17 E5 on enclosed inquiry slip

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EMPTY AGAIN! NO CLEAN SPOT!

DON'T SWEAR — JUST INSTALL *ELECTRIC-AIRE* "C" MODEL HAND DRYERS ELIMINATES ALL TOWEL PROBLEMS!

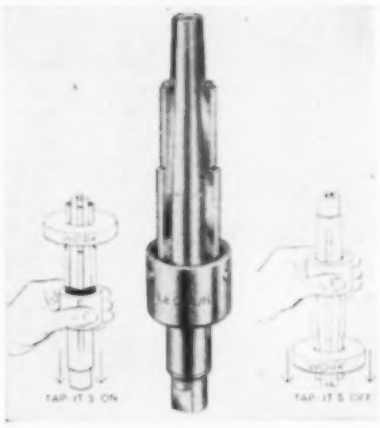
- Electric-Aire automatic service creates good will!
- Saves Over 90% of Towel Costs!
- Pays for Itself in a Few Months of Operation!
- Provides Continuous, Sanitary, Dependable Drying through 3 shifts a day. Built to last 20-30 years.

Write Dept. NE For Details About America's Finest Dryers.

ELECTRIC-AIRE ENGINEERING CORP. 209 W. Jackson Blvd. Chicago 6, Ill.
ELECTRIC-AIRE OF CANADA • 669 Talbot Street • St. Thomas, Ontario

For more details circle NED-18 E5 on enclosed inquiry slip

LE COUNT EXPANDING MANDRELS
replace 400 arbors with 11 tools

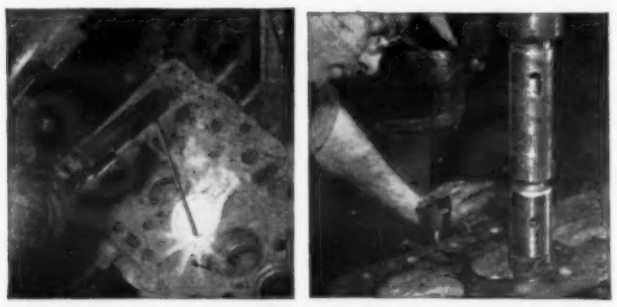


Accuracy with Ease

Three parallel stepped jaws sliding in tapered slots grip work precisely making mandrel ideal for both finish and inspection operations. Hand manipulation eliminates arbor press, cuts operating time, avoids strain on work—whether tough steel or thin-section nonferrous materials. Concentricity is guaranteed within 0.0002-in. T.I.R. Mandrel jaws carry several steps, providing wide holding range. Thus 11 mandrels accommodate all bore sizes from ⅜-in. to 7 in. Made of hardened steel, ground and lapped.

Write for details in 4-page bulletin. Made by **Le Count Tool Works, Inc.**, 390-N Capitol Ave., Hartford 6, Conn. *(Advt.)*

▲ For more details circle **NED-19 E5** on enclosed inquiry slip ▲



Make machinable welds in cast iron *easily*

Use NI-ROD®, the high-nickel core wire electrode for sound, machinable welds in cast iron.

- Seldom needs preheat or postheat
- Works on either A.C. or D.C.
- Stable arc in all positions
- Smooth bead contour
- Excellent "wash"
- Easy slag removal

NI-ROD is available in 3/32, 1/8, 5/32 and 3/16 inch diameters in 5-pound sealed containers. Order a package today.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.

INCO **Welding Products** Electrodes • Wires • Fluxes

▲ For more details circle **NED-20 E5** on enclosed inquiry slip ▲

Cordomatic*

AUTOMATICALLY CONTROLLED

DROP LIGHT REELS

* Reg. U.S. Pat. Off.

13.95
20' Length
30' and 40' Lengths Slightly Higher Prices

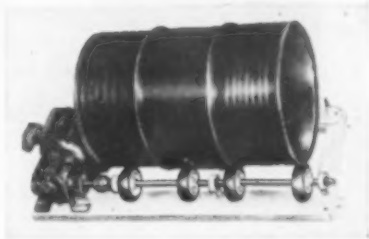
A rugged and dependable piece of equipment that gives you light where you want it . . . when you want it.

- ★ Crack-proof phenolic pistol-grip handle includes the time proven LEVOLIER toggle-action switch and socket.
- ★ New type heavy duty, all steel, all chrome reflector with swing-open guard.
- ★ Heavy gauge steel casing . . . smartly styled with a strikingly new textured finish . . . grease and oil resistant and set off by gleaming chrome trim.
- ★ Underwriters' approved S.J. Neoprene cord features a kink proof, moulded-into-core jacket construction . . . oil and water resistant.
- ★ Fool-proof gravity action locking mechanism has nothing to break or jam.
- ★ The UNDERWRITERS' LABORATORIES INC. seal on CORDOMATIC DROP LIGHT REELS is your assurance of safety and dependability.

Cordomatic* DIVISION OF THE VACUUM CLEANER CORP. OF AMERICA
1724 INDIANA AVE., PHILA. 32, PENNA.

▲ For more details circle **NED-21 E5** on enclosed inquiry slip ▲

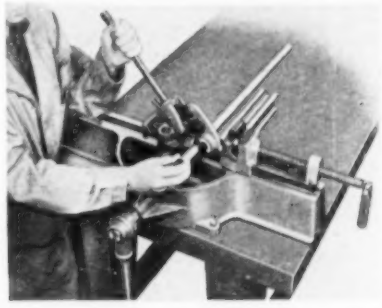
DRUM ROTATOR
can agitate, mix or tumble



Drums with loads up to 1000 lb can be rotated at speeds from 10 to 30 rpm by this floor model 15154 Rotator. Unit can be used for agitating, mixing and tumbling in the original container and is adjustable for various size drums. The 6-in. diameter of both neoprene drive and idler wheels assures adequate clearance for the largest drum protector rings. Right angle geared head ½-hp motor can be supplied to meet any electrical specifications. Rotator is provided with mounting lugs and occupies floor space of 24 x 60 in. Made by **Morse Mfg. Co.**, 727 W. Manlius St., East Syracuse, N. Y.

▲ For more details circle **NED-22 E5** on enclosed inquiry slip ▲

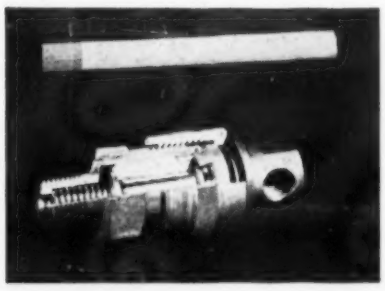
TUBE BENDER
bench mounted, manually operated



Toggle clamp now incorporated in the model 824 tube bender saves operation time by providing quick gripping of the tube to be bent. It is attached by inserting its swivel block pin into the third hole of the bender's radius block. Without a shoe insert, it accommodates tubing of 1½ in. OD. Inserts are available for tubing from ⅜ to 1¼ in. OD. Bender itself is bench mounted for fabrication of metal tubing for fluid handling systems. Made by **Parker Appliance Co.**, Tube & Hose Fitting Div., Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

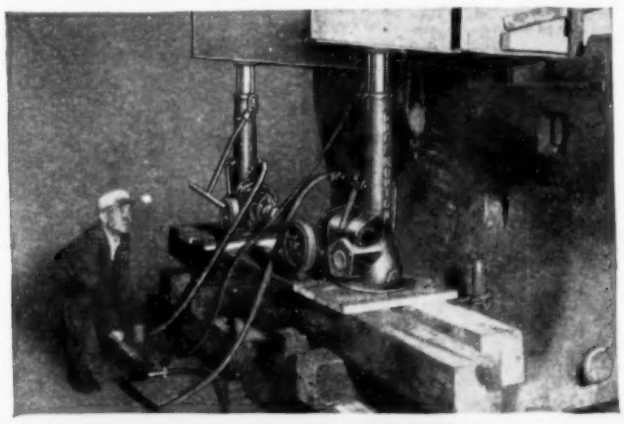
▲ For more details circle **NED-23 E5** on enclosed inquiry slip ▲

ROTATING SWIVEL
for high pressure, high speed uses



Built for high pressure and high operating speeds, this rotating swivel is equipped with spring-loaded Teflon rings, self-centering ball thrust bearings and efficient axial bearings. The compact model 4000 swivel, applicable to brake and clutch uses, measures only 3½ x 1½ in. Made by **Hydraulic Unit Specialties Co.**, Waukesha, Wis.

▲ For more details circle **NED-24 E5** on enclosed inquiry slip ▲



How You Can Lift 200 Tons With Air Power Jacks

Connect two Duff-Norton 100-ton capacity air motor power screw jacks (shown above) to a Y-valve connection on the same air system you use for other pneumatic tools, press the double valves with your fingers and the load is lifted. No manual effort required. Safe, dependable—made in 20, 35, 50, 75-100 ton models. Other uses: pushing pipe, repairing heavy construction equipment, industrial forming work. Send for Bulletin AD-11-N. **Duff-Norton Company, P.O. Box 1889, Pittsburgh 30, Pa.**

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

▲ For more details circle **NED-25 E5** on enclosed inquiry slip ▲

Etch Iron, Steel or Their Alloys

IDEAL *Electric* ETCHERS

Burn a Permanent Mark for
- Model Nos.
- Hardness Tests
- Inventory Data
- Gauge of Metal Identifying Tools, Jigs, Dies
- Parts Nos.
- Sizes
- Dozens of Uses

TRY IT OUT!

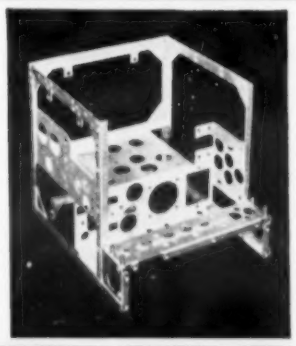
More reliable than tags, far cheaper than special plates. Portable—safe—fast! Repays low cost dozens of times over in time and money saved. "Universal" Model (shown) has 4 etch heats —120 to 700 watts. Other sizes for all sizes of work.

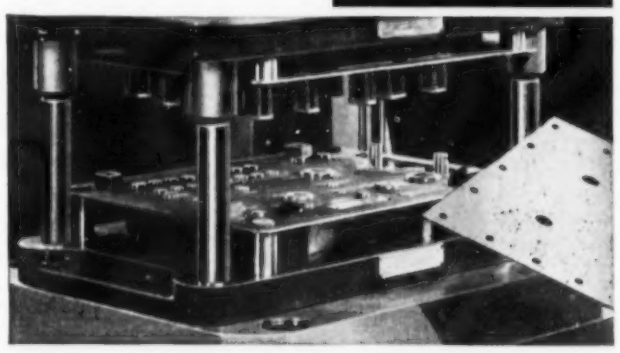
SOLD THROUGH LEADING DISTRIBUTORS

IDEAL INDUSTRIES, Inc.
1032 Park Ave., Sycamore, Illinois
Please send catalog data and arrange free demonstration on IDEAL etcher.
NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

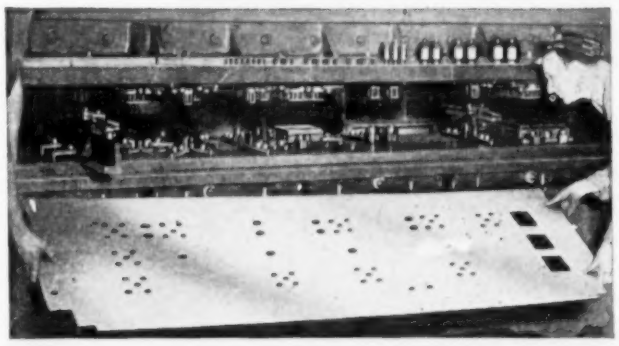
▲ For more details circle **NED-26 E5** on enclosed inquiry slip ▲

OVER 2,000 PLANTS
are making up their Metal Perforating Die Sets by Whistler methods





WHISTLER MAGNETIC PERFORATING DIES



WHISTLER ADJUSTABLE PERFORATING DIES

- Lower die-making costs.
- Start production quicker.
- Save work handling labor.
- Increase press production.
- Versatile in job application.
- Perforate materials to ¼" thick mild steel.
- Combine horizontal and vertical perforating operations.
- Work in practically any size or type of press.
- All parts re-usable and interchangeable.
- Precision assured on short or long runs.
- Parts interchangeable right in the press.
- Magnetic dies assembled on templates.
- Adjustable dies assembled on Tee slot die sets.
- Save floor and storage space.
- Die investment not "tied up."

WHISTLER DIES ARE CUTTING COSTS FROM COAST TO COAST

SEE FOR YOURSELF
Without Obligation

Our *illustrated* Catalogs show the simplicity, economy and versatility of Whistler methods. See for yourself why Whistler customers are the biggest names in industry.

S.B. WHISTLER & SONS, INC.
750 Military Road Buffalo 23, New York

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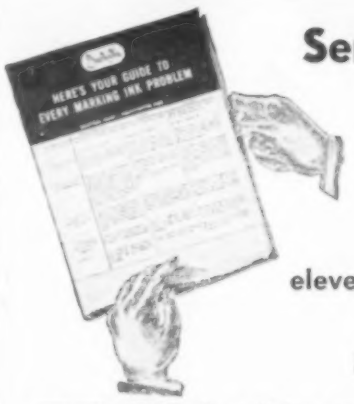

Send for this free INK booklet

It tells about eleven marking inks—one for e-v-e-r-y Marking Problem!

PENETRATIVE—fast drying on semi-porous materials such as plastics, lacquered surfaces and slower drying on glass, porcelain, enamel, plated metals. Does not gum on pad.
KLING—moderately fast drying on glass, porcelain, metals.
SLINK—very fast drying on glass, porcelain, metals.
NYLON MARKING—for nylon and other fabrics.
ALSO numbering machine ink, stencil, indelible, meat branding and other marking inks.

A very valuable treatise free to all who write on their letterhead to

LOUIS MELIND COMPANY
362 W. Chicago Ave. Chicago 10, Ill.

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NEW EQUIPMENT DIGEST

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

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FOR • DRAWING • SKETCHING • PLANNING • PAINTING

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• Rubber-tipped legs.
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• Ideal for ENGINEERS, DRAFTSMEN, IDEA MEN, ARTISTS, STUDENTS, etc. ORDER TODAY

only $7.95 each

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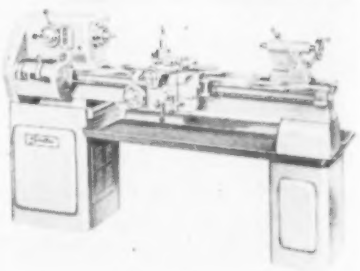
GEARED HEAD LATHE
15-in. model has toolroom accuracy



All controls of this modern 15-in. Sebastian geared head lathe are centrally grouped within instant reach of operator. Features include wide heavy bed, antifriction bearing headstock with "zero precision" tapered roller bearings supporting the spindle, cam action tailstock clamp and easy-shifting spindle speed dial. Lathe has 15¼-in. swing over the bed and 10-in. over the carriage, with 31½-in. distance between centers maximum. Sixty thread pitches are available in range of 4 to 240 threads per inch. Feed range is 0.002 to 0.120-in. Spindle speeds are 35 to 910 rpm with 1725-rpm motor and 30 to 610 rpm with 1200-rpm motor. Two-speed motor can be used to provide 16 speeds in range of 17 to 910 rpm. Spindle accommodates up to 1-in. handwheel type collets and 1⅜-in. spindle nose collets. Cabinet in pedestal leg provides convenient storage for wide range of tools and available accessories. Made by **Sheldon Machine Co.,** 4215 N. Knox Ave., Chicago 41, Ill.

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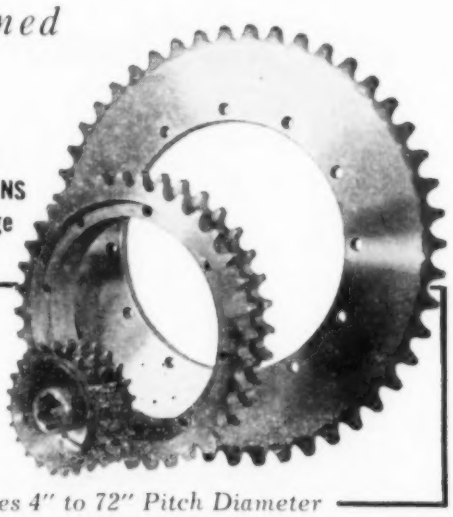
SPROCKETS *with* INDUCTION HARDENED TEETH *last longer . . . cost no more than flame hardened teeth*

SEND YOUR SPECIFICATIONS no tool charge



Sizes 4" to 72" Pitch Diameter

CARDWELL MFG. CO., INC.
BOX 2001, DEPT. 1 • WICHITA, KANSAS

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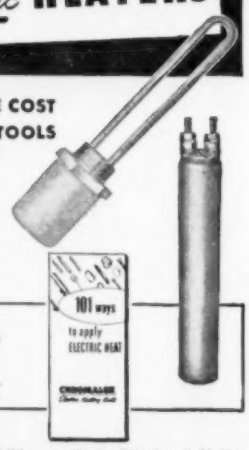
15,000 TYPES, SIZES & RATINGS to meet your heating needs!

CHROMALOX *Electric* **HEATERS**

INCREASE PRODUCTION . . . DECREASE COST WITH THESE LOW-COST PRODUCTION TOOLS

Use Chromalox Electric Heaters to heat liquids, air and gases. Use them to heat platens, dies, molds and moving metal parts. Use them anywhere you want fast, economical and easy-to-control heat for production line processing. Chromalox Heaters are simple to install, efficient, come in types, sizes and ratings for working temperatures up to 1100° F. Most are available from stock.



FOR IDEAS ON HOW TO USE CHROMALOX HEATERS ▶ WRITE FOR THIS HANDBOOK

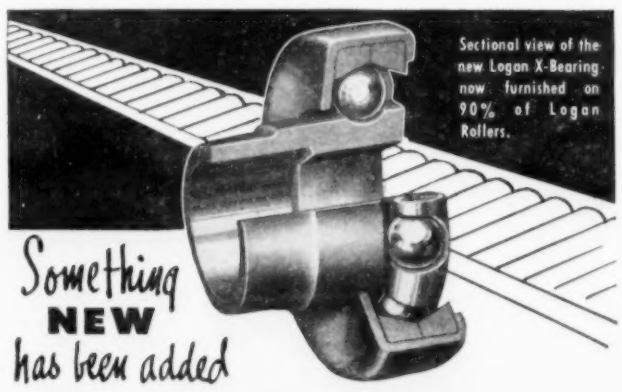
Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on page 75

CHROMALOX A-4411

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-30 E5 on enclosed inquiry slip



Something NEW *has been added*

at no increase in price . . .

It costs no more to get conveyors equipped with the Logan X-Bearing . . . the new low friction, extra quiet bearing, with semi-precision construction. Also, this bearing is interchangeable with old style bearings and will be furnished on replacement orders. Logan is now standardizing on this high efficiency construction. Write for Folder X-1.

LOGAN CO., 215 Cabel St., Louisville 6, Ky.

Logan Conveyors now standardizing on the new **X-BEARING**

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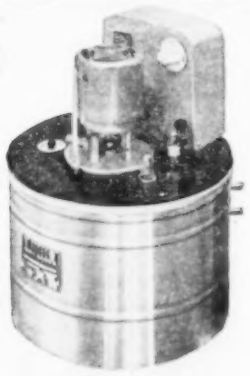
PRECISION



"Temp-Trol" Circulating System

FOR: Rapidly circulating constant temperature media at controlled temperatures — with quick and accurate control (±0.05°F)

FEATURES:
• Wide temperature range: from 5° above room temperature to 210°F.
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TYPICAL USES:
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Precision Scientific Company
3755 West Cortland Street • Chicago 47, Illinois

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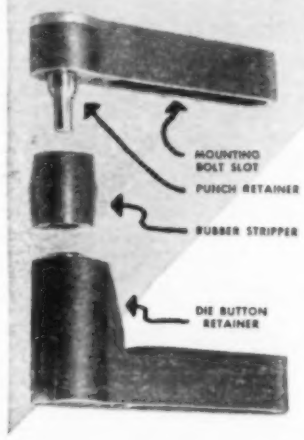
NOW!

PUNCH & DIE BUTTON POSITIONING Flexibility with R-B Flex-Mount RETAINERS



Cut your set-up time for short production runs on light gauge metals . . . R-B Flex-Mount Retainers permit quick, easy and flexible mounting of punches and die buttons. For, Flex-Mount Retainers are easily bolted in any desired position on T slotted or drilled and tapped commercial die sets.

Standardized R-B punches and die buttons (round, square, oblong or special shapes to customer specifications) are used in these retainers. Stripping is accomplished with R-B rubber strippers or R-B rubber covered springs to eliminate costly metal strippers, retainer screws and springs.

Use R-B Engineering Service for Your Tough Piercing Problems.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 78 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

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EVERY

SAFETY ENGINEER WILL WANT A COPY OF

THIS BOOK

Here is a book that describes Wheeler's complete line of safety clothing. No matter what you need, from helmets to shoe covers, Wheeler can supply you. Complete ranges of sizes, styles and materials including asbestos, aluminized asbestos, flame-proofed duck, jean cloth, leather, fiberglas, wool. Send for your FREE COPY today!

WHEELER PROTECTIVE APPAREL INC.
WHEELER 234 W. Huron St. Chicago 10, Illinois
"More Safety per Dollar"

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which of these FINISHING PROBLEMS are yours?

- ☐ Soldering bond
- ☐ Decorative effects
- ☐ Paint adhesion
- ☐ Plating bond
- ☐ Anodized film adherance
- ☐ Satin finishes
- ☐ Instant wetability
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- ☐ Brazing bond
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- ☐ Stress relief
- ☐ Vinyl coating bond
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- ☐ Smoother surfaces
- ☐ Etching
  - ☐ Plastic
  - ☐ Metal
  - ☐ Glass
- ☐ Elimination of galling
- ☐ Reduction of friction
- ☐ Visual inspection

DO IT MANUALLY OR AUTOMATICALLY WITH PRESSURE BLAST WET BLASTING

TWO SPEED

This ad is your coupon. Check off your problem (s) and mail today for free illustrated literature . . . Application data . . . case history information!

THE CRO-PLATE COMPANY INC.
747-E WINDSOR ST. HARTFORD 5, CONN.

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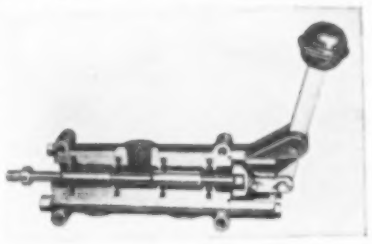
PILOT VALVES
operate on air, gas, water, oils



From five valve units and seven operators and their springs, the type D line of Pilotair valves can be made into over 3000 different two, three and four-way valves. Basic units are a two-way valve, and three and four-way valves with open and tapped exhausts. Button, lever, solenoid, cam, pilot cylinder, pedal and treadle operators are offered. Valves can be modified on the job to fit installation requirements by rotating their operators, their mounting brackets and each of their ports in 90-degree steps. Operation can be in any position with air, gas, water and most oils. Maximum operating temperature is 200° F and maximum operating pressure is 50 psi for gages and 500 psi for liquids. Made by **Westinghouse Air Brake Co.**, Industrial Products Div., 1953 Herman Ave., Wilmerding, Pa

▲ For more details circle NED-39 E5 on enclosed inquiry slip ▲

ALUMINUM PAINT
for chain link fences

Fence-Bond, an aluminum paint for chain link fences, does not harden but stays plastic under a durable "hide" which sets up by oxidation in 4 hours. One coat covers and every joint is penetrated and sealed. Liquid content is a blend of heat-treated dehydrated fish and vegetable oils that extract moisture content from rust and seal the metal against further corrosion. It can be applied over tight rust, and all rust action is stopped. Paint is offered in 1 and 5-gal containers in aluminum green and red. Made by **Skybryte Co.**, 3125-6 Perkins Ave., Cleveland 14, O.

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WASTE RECEPTACLE
with self-closing top door

Accessible from all sides, this closed drop-in waste receptacle receives paper towels, cups and other waste through its self-closing top door. It has a white baked-on enamel finish with wrap-around stainless steel base. Heavy steel is chemically treated for corrosion resistance, making it suitable for indoor or outdoor use. Removable circular watertight galvanized liner has a full-swing handle. Made by **Bennett Mfg. Co.**, Alden, N. Y.

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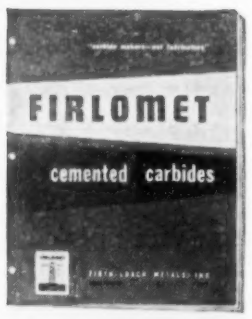
THIS NUMBER

BRINGS YOU THIS CATALOG

telling you of an important new source of cemented carbides



FIRLOMET, a new true low porosity carbide, has *already proved* its greater resistance to edge wear, chipping and cratering. It's a carbide with greater impact strength and more uniform qualities throughout.

Yet FIRLOMET *costs no more.*

Here's why: Firth Loach's new laboratory-like plant (all new equipment, the very latest of its type) makes possible unusually precise production control. The laboratory-like approach to carbide making, with rigid inspections at every step, results in a finer carbide.

Take this first step: Our new catalog describes all types, sizes and grades of FIRLOMET, gives price information. Send for it today.

FIRLOMET

FIRTH-LOACH METALS, INC.
Buttermilk Hollow Road, McKeesport, Pennsylvania
"Carbide Makers—Not Fabricators"

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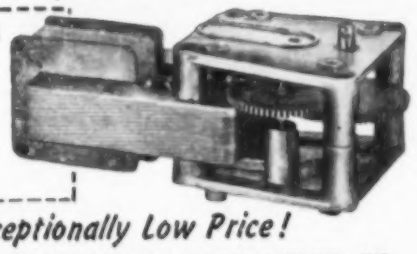
HUNDREDS OF USES for the New Power-packed KASSON SHADED POLE INDUCTION TYPE

MIDGET ELECTRIC MOTORS
With Compact Gear Train

- Geared to 6 RPM with torque of 20" lbs.
- Other models from 1 RPM to 1155 RPM



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IDEAL FOR ROTISSERIES AND BROILERS • MOTION DISPLAYS • DISPENSERS • ACTUATORS • BARBECUE TURNERS • COIN OPERATED DEVICES • GAMES • TOYS . . . *and hundreds of other uses.*

Designed, manufactured and assembled in our own plant! Small, compact and highly efficient, these Kasson geared motors are constructed for long life under constant use. Consume no more than 15 watts. 110 volts AC, 50/60 cycles. We can also furnish stators and rotors separately for inclusion in special castings—or complete motors without gear trains. We will make special motors to your specifications on a quantity basis.

Roto-Sho Electric Turntables—quantity prices low as $4.00 ea.

Write now for complete details and prices to Dept. N.E.D.-35

KASSON DIE & MOTOR CORP.
Formerly General Die & Stamping Co.
32-14 NORTHERN BLVD., LONG ISLAND CITY 1, N. Y.
INTEGRITY SINCE 1919

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The instrument man's "Man Friday"

You'll never run out of uses for this high-fidelity Foxboro Portable Potentiometer. Use it to check overall accuracy of your temperature instruments and thermocouples; as a substitute temperature instrument during emergencies; for exploring temperatures not requiring continuous measurement.

Accurate to ¼ of 1% of scale. Extra-long (17") scale for close, accurate reading and *vernier dial* for precise balancing. Weighs only 12½ lbs. Rugged metal case-and-cover. Write for details. **The Foxboro Company, 565 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO REG. U.S. PAT. OFF. PORTABLE POTENTIOMETERS

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ADAMS creates a Cyclone to give you Drier Compressed Air

The Adams Aftercooler and Cyclone Separator are a perfect team. The highly efficient aftercooler condenses more moisture . . . the separator's unique design creates a cyclone to remove more of the condensation.

Write today for all the facts . . . Get your copy of Bulletin 711.

R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

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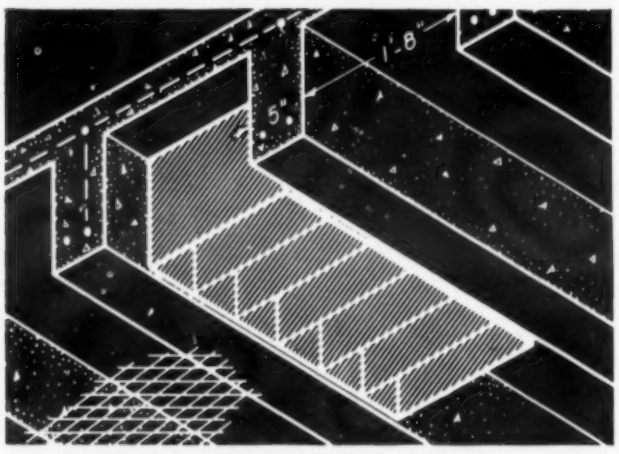
VISIONADE MFG. CO., Inc.
641 Lexington Avenue • Brooklyn 21, N. Y.

▲ For more details circle NED-46 E5 on enclosed inquiry slip ▲



Corrugated board forms for concrete floors save Texas builder $15,000

Using corrugated board instead of steel trays as formwork on a dormitory saved one Texas builder $15,000.

That's just one of many new jobs for corrugated board — wish *we'd* thought of it. Light but strong (the forms illustrated take a 600-lb. live load), Gair corrugated board comes in standard or double-walled sheets, fabricated to your specs.

It may be just the material to get your latest project off the drawing board. Write us for full details. SC.5.2

GAIR — SHIPPING CONTAINERS
FOLDING CARTONS • PAPERBOARD
ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17, N.Y.

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1005 East Road, Milldale, Conn.
Gentlemen:
Please send me FREE, your new Catalogue "Alsop Liquid Processing Equipment"
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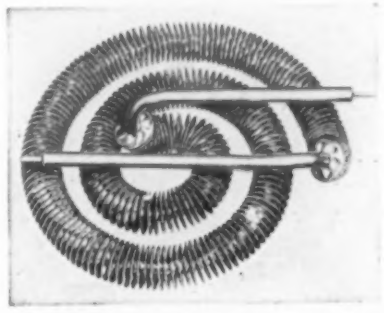
City _____ Zone ____ State ____

ALSOP ENGINEERING CORPORATION
Filters, Filter Discs, Pumps, Tanks, Mixers, Agitators

▲ For more details circle NED-48 E5 on enclosed inquiry slip ▲

FINNED ELECTRIC HEATERS formed to any desired shape



Slim-fin electric heaters are made by brazing spirally-wound steel fins to standard rod type heating element. Heaters are formed to shape before fins are attached, permitting flexibility and compactness in design. Optional spacing of fins ranges from four to eleven to the inch. The 0.312-in. tubing has 15/16-in. wide fins and is adaptable to all types of convection heating. Capacities range from 500 to 2000 w. Made by **Ferrod Mfg. Co.**, 1605 N. River St., Batavia, Ill.

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DIFFUSION PUMP OIL chemically and thermally stable

High vacuum can be attained without resorting to traps involving liquid air or charcoal when Bevins 8 oil is used in diffusion pumps. It is chemically and thermally stable within the limits imposed by high vacuum pump utilization. Besides the diffusion pump applications, it can be used in differential manometers and immersion lenses, as heat transfer medium in constant temperature baths and as lubricant where low vapor pressure, high boiling point and high flash point are desirable. Specific gravity is 0.985-lb at 20° C and ultimate vacuum which can be produced in a three-stage fractionating pump is 2×10^{-7} mm mercury at 25° C. Made by **A. Daigger & Co.**, 163 W. Kinzie St., Chicago 10, Ill.

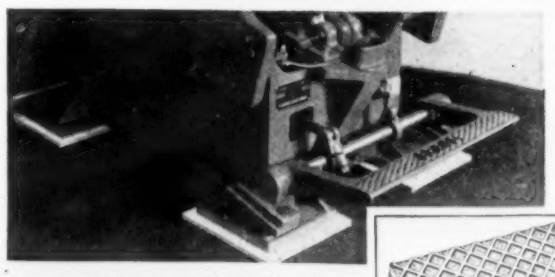
▲ For more details circle NED-50 E5 on enclosed inquiry slip ▲

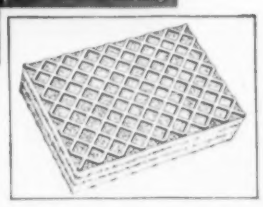
BLIND RIVETS installed from one side of work

Used heretofore in aircraft manufacturing, Commercial blind rivets, which are installed by one man from one side of work, are now available to industry generally. Rivets are set by special gun which pulls stem into hollow shank, upsets a head on blind side and fills the hole in the work—all in a split second. Rivets can be used in sandwich construction, box sections, tubes, ducts and other hard-to-reach places. Made by **Townsend Co.**, Dept. 123, New Brighton, Pa.

▲ For more details circle NED-51 E5 on enclosed inquiry slip ▲

Quiet Heavy Machinery With AIR-LOC* 4-17-4





Save 50% on installation
NO BOLTING CEMENTING WAITING

AIR-LOC lifetime Bakelite vinyl-cushion machine pads absorb vibrations and shock loads. They reduce noise, improve machine performance and extend life. Pads withstand repeated loadings up to 1000 psi and are re-usable. Pads are unaffected by oil, water, brine or chemicals. Machines are readily leveled by shimming. Free sample available. Send for bulletin "Introducing AIR-LOC"

*Registered trade mark Pat. Pending

CLARK • CUTLER • McDERMOTT CO.
FRANKLIN, MASSACHUSETTS

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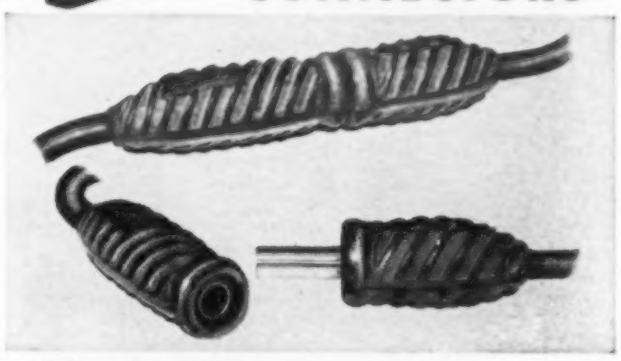
Quick-HEAVY DUTY CONNECTORS



Ideal CONNECTOR FOR QUICK SERVICE ON ELECTRIC POWER SUPPLY—

Recommended for both indoor and outdoor service in line repair, lifting magnets, welding machines, battery chargers, tap changers, motor connections, air compressors or any portable electrical equipment. *Available in two sizes—200-400 amp capacity.* Write Dept. E.

H. W. EARL COMPANY
CORAL GABLES, FLORIDA

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SANSTORM IT!

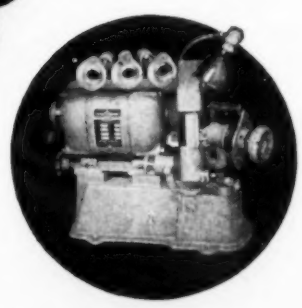
Like more companies are finding every day, your company can realize tremendous gains in production profits by fast "Sanstorming" of steel fabrications, forms, equipment.

Sanstorm is famous for *foul-free* sandblasting from lightest to heaviest jobs, using any abrasive, *and less abrasive.*

Increase your profits. For full details write today to Charles A. Spears, Vice President, Sanstorm Manufacturing Company, Santa Clara and H Streets, Fresno, California.

▲ For more details circle NED-54 E5 on enclosed inquiry slip ▲

STOP WASTING DRILLS!



Accurate Grinding reduces breakage, prolongs drill life!

FREE BOOKLET . . . shows how to prevent excessive drill breakage, vastly prolong drill life . . . and eliminate time wasted by valuable skilled mechanics grinding drills!

Black Diamond's "Positive Positioning" feature positions drill to exact twist you want . . . *automatically.* Now anyone can sharpen and web-thin with scientific accuracy . . . on a Black Diamond Drill Grinder! WRITE TODAY!

BLACK DIAMOND

SAW & MACHINE WORKS, INC. — 72 NORTH AVE. NATICK, MASS.

▲ For more details circle NED-55 E5 on enclosed inquiry slip ▲

CONCENTRATED STRIPPER!

DUNKIT Easily Removes Carbon, Rubber, Paint, Tar, Gum, Plastic, Oxidized Oils, etc.

JUST DIP AND RINSE

Above photo shows how thoroughly DUNKIT strips a heavy, protective asphalt coating. DUNKIT works as effectively on almost every type of paint and soil. Easy to use, just dip parts into DUNKIT, allow to soak until film or soil is softened or falls off, then pressure rinse with water. DUNKIT retains stripping strength even after prolonged use. It's quick, easy, economical to use!

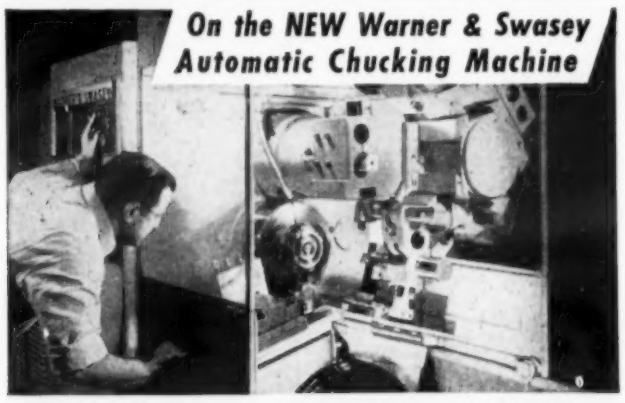
Old-fashioned strippers are composed of 20% water seal and only 80% active ingredients. DUNKIT is 100% pure stripper—you add your own water seal (right from a water tap) and save money! Regardless of price, economical DUNKIT out-performs any stripper on the market. DUNKIT is absolutely non-flammable, non-explosive; it is safe for use on all metals, including aluminum, zinc and copper. Use DUNKIT for stripping stubborn soils from machine parts, fuel oil burners, heat exchangers, small tools, paint guns, as well as automotive, aircraft and railroad engines, etc. Ideal for cleaning pipe lines and desealing integral fuel tanks. Careful laboratory production supervision guarantees "Quality Control".

SEND FOR FULL INFORMATION

the PENETONE Co.

BOX ND-555, TENAFLY, NEW JERSEY

▲ For more details circle **NED-56 E5** on enclosed inquiry slip ▲



Turret is accurately positioned IN ONE SECOND by Star-Kimble Brakemotor

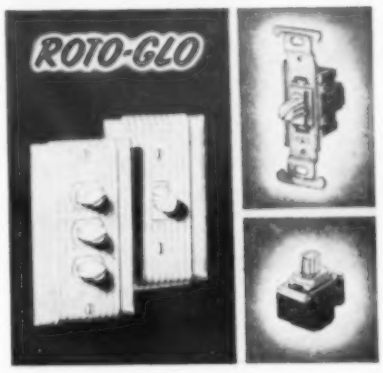
Turret and tools on this Warner & Swasey 2AC Machine weigh 1250 pounds—and a standard 1 hp Star-Kimble Brakemotor accurately positions the turret for the next operation *within 1 second!* RAPID TRAVERSE MOTOR is a completely special Star-Kimble design. FOR THE MAIN DRIVE MOTOR—selected by the customer—many 2AC purchasers are specifying a 15 hp Star-Kimble motor specially modified for the application.

Standard and special motors of all types, 1 to 125 hp; generators and motor-generator sets, 1 to 100 kw; marine motors, ½ to 125 hp.

STAR-KIMBLE
MOTOR DIVISION
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

▲ For more details circle **NED-57 E5** on enclosed inquiry slip ▲

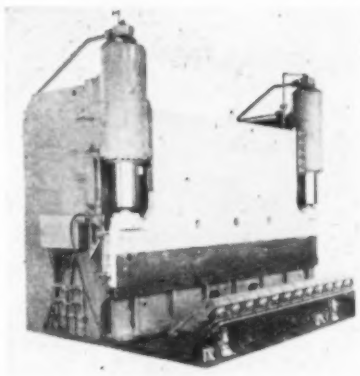
SILIENT SWITCH
rotating type glows in dark



Usable to full current rating on fluorescent and incandescent lighting, Roto - Glo switches are quiet in operation and have luminous knob which glows in the dark. They can also be used on motors when the full load current is not more than 80 per cent of the switch rating. Screwless terminal switches can be mounted in any position. They are available in the Despard type for combination with outlets and pilot lights or in conventional strap type. Former are rated 15 amp, 120 or 277 v ac, while the strap type is rated at 15 amp, 120 v ac. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

▲ For more details circle **NED-59 E5** on enclosed inquiry slip ▲

HYDRAULIC STRETCH PRESS
500 ton unit has 16-ft length



This hydraulic stretch press, with overall length of 16 ft is used to form leading edges of aircraft wings and can be used to perform many similar stretch-forming operations. Press uses a male die around which material is stretched. Complex shapes can be stretch-formed by employing a single plastic or Kirksite die. Operation of press and all forming equipment is obtained with simple pistol-grip control. Stretch-forming equipment is easily removed, converting press into versatile press brake. Model 500-16 press has 36-in. stroke, 48-in. open height and 12-ft long stretch jaws. Made by **Pacific Industrial Mfg. Co.**, 849 Ninth Ave., Oakland, Calif.

▲ For more details circle **NED-60 E5** on enclosed inquiry slip ▲

Laminating Resins

Synvar Corp.—Synvaren phenolic type laminating resins, in alcohol or water solution, are easily applied by conventional impregnating equipment to alpha or kraft paper, cotton or asbestos cloth, nylon or glass cloth. They are described and their properties given in 12-page bulletin. Varnishes for laminating cloth and paper for electrical resistance, mechanical strength, low water absorption and decorative qualities are also covered in detail.

▲ For more details circle **NED-61 E5** on enclosed inquiry slip ▲

POWER and FREE CONVEYORS for Assembly, Testing, Live Storage

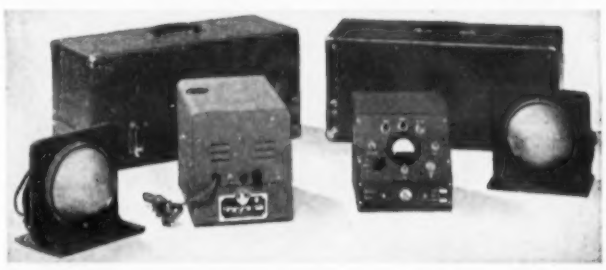
This Webb "Power and Free" conveyor system, in a plant of one of the "Big Three" automobile manufacturers, is a prime example of efficiency, reduction of production costs and elimination of manual handling of transmissions.

Fifteen "Power and Free" conveyors are synchronized into an automatic system that is thousands of feet long. From the receiving of transmission parts, through final assembly, several live storage areas, testing, and delivery to shipping, the transmissions never leave the Webb "Power and Free" Conveyors. 4468

JERVIS B. WEBB CO.
Specialists in Custom Conveyor Systems
8921 ALPINE AVENUE • DETROIT 4, MICHIGAN
Offices and Representatives throughout the World
FACTORIES: DETROIT • LOS ANGELES • HAMILTON, CANADA

▲ For more details circle **NED-62 E5** on enclosed inquiry slip ▲

BAD NEWS FOR BURGLARS!



the first completely foolproof burglar alarm system ever made!

Here, from Kidde, is the newest, most effective kind of plant protection on the market today. It protects any given area *completely*—wall-to-wall, door-to-door, floor-to-ceiling. It's economical, easy to install, and is absolutely *foolproof!*

The Kidde Ultrasonic Burglar Alarm System pictured above consists of a transmitter, a receiver, an electronic "brain" and an alarm panel. Here's how it works:

The transmitter and receiver, each about the size of half a grapefruit, are placed inconspicuously within the area to be protected. These units are connected in turn to the electronic "brain." The alarm panel may be located in any guard office, local police station or Central Station Alarm Company.

When the system is turned on, the transmitter fills the entire area with "silent sound"—sound too high to be heard by the average human ear. This high-frequency sound is picked up by the receiver.

As long as there is no motion within the protected area, no signal reaches the alarm panel. But if an intruder enters the area, or if a door or window is opened, the electronic "brain" triggers the system *immediately*. Even if a thief conceals himself in the protected area *before* the system is turned on, his *first move* gives him away once you put the system into operation.

There is *no* way to beat the Kidde system. If power fails, or if a wire is cut... or if someone tries to sabotage any of the system components, tamper-proof devices instantly sound the alarm.

In addition to giving you the *best* protection you can buy, the Kidde system has the additional advantage of being portable. No expensive, permanent wiring is required, and the entire system can be shifted from one location to another with very little trouble. The system works on regular 110 volt, 60 cycle AC current, and can be plugged into any convenient outlet.

Maintenance, too, is simple. The system uses only four electronic tubes, can be serviced by any competent radio man or electrician.

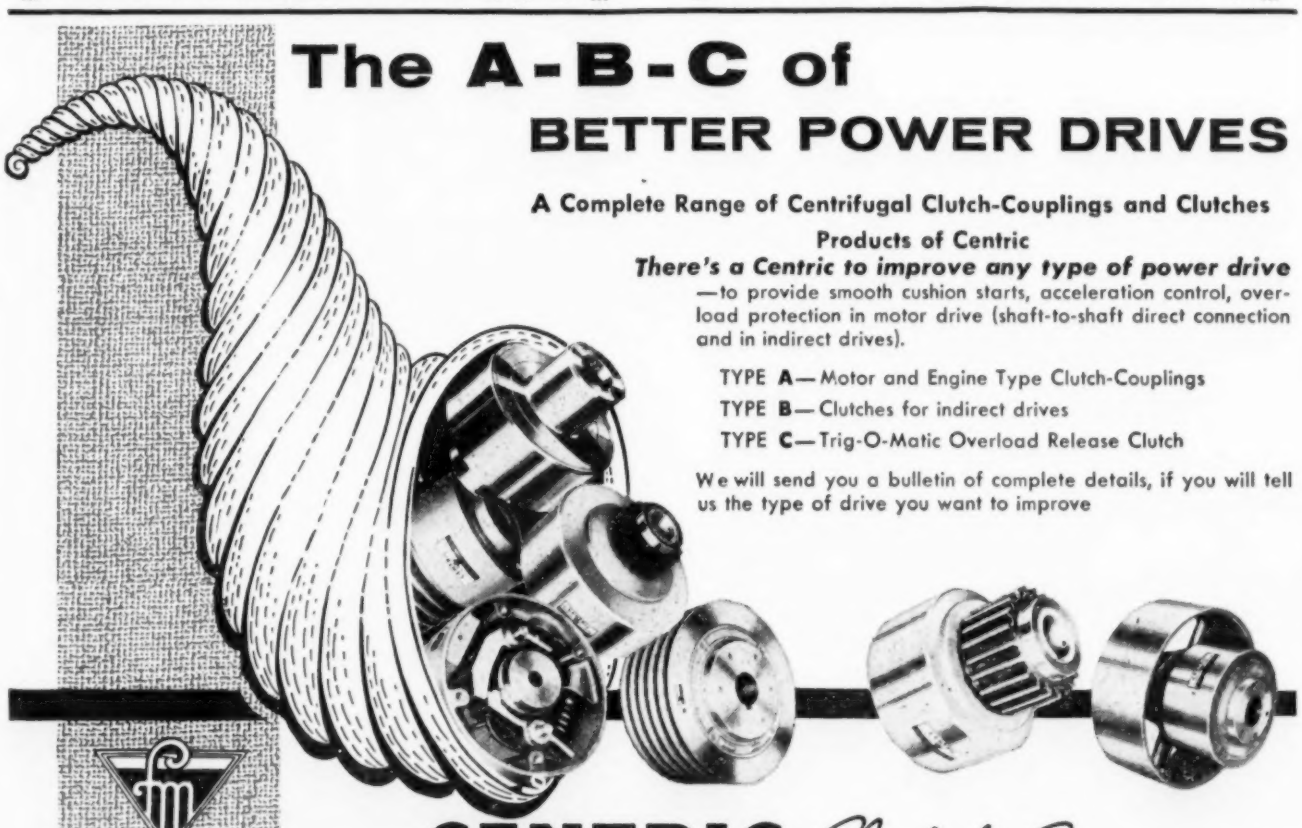
The four basic units shown above can protect up to 7500 square feet. Specific applications may require a few additional components, however. Find out more about this economical, foolproof protection. Send today for Kidde's Ultrasonic Alarm System booklet.

Kidde *The words 'Kidde', 'Lux', 'Lux-O-Matic', 'Frye-Freez' and the Kidde seal are trademarks of Walter Kidde & Company, Inc.*

Walter Kidde & Company, Inc., 524 Main St., Belleville 9, N. J.

▲ For more details circle **NED-63 E5** on enclosed inquiry slip ▲

The A-B-C of BETTER POWER DRIVES



A Complete Range of Centrifugal Clutch-Couplings and Clutches

Products of Centric

There's a Centric to improve any type of power drive

—to provide smooth cushion starts, acceleration control, overload protection in motor drive (shaft-to-shaft direct connection and in indirect drives).

TYPE **A**—Motor and Engine Type Clutch-Couplings
TYPE **B**—Clutches for indirect drives
TYPE **C**—Trig-O-Matic Overload Release Clutch

We will send you a bulletin of complete details, if you will tell us the type of drive you want to improve

CENTRIC *Clutch Company*

P. O. BOX 175 • U. S. ROUTE 9 AT MAIN STREET • WOODBRIDGE, NEW JERSEY

3502

▲ For more details circle **NED-58 E5** on enclosed inquiry slip ▲

Throat DRY, PARCHED, DUSTY?

YOU NEED . . .
DUPOR No. 40

The respirator whose 40 sq. in. double filters provide double protection against pneumoconiosis and silicosis producing dusts. Double comfort in breathing, too! Light, less than 5 ounces—compact—sturdily constructed. U. S. Bureau of Mines approved. Order sample today, $3.00 postpaid.

H. S. COVER, SOUTH BEND, IND.
P.O. BOX #2508

"Respirators for Industry since 1894"

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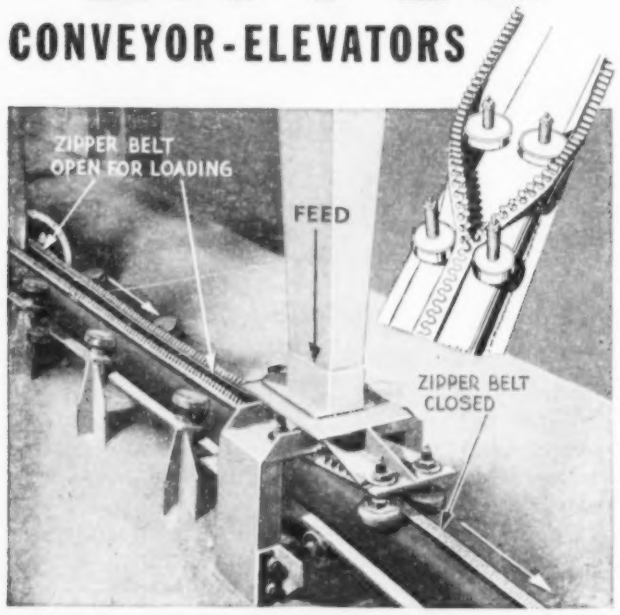
"ZIPPER" CONVEYOR-ELEVATORS



A Sealed "MOVING PIPE LINE"

Prevents Degradation and Contamination

For All Types of Granular, Pulverized, Flaky or Lumpy Materials

• The S-A "ZIPPER" Conveyor-Elevator zips bulk materials into a rubber "tube" that moves with the load. Conveys up, down or horizontally—in one or more planes—without crushing or "packing." There's no agitation or segregation—no abrasion against conveyor sides—no propelling pressure on the material.

"ZIPPER" belt and teeth open and close automatically for loading and discharge. Dust is sealed in, contamination sealed out. There are no pockets in which material can collect. Equally suitable for long or short distance conveying and elevating, requiring minimum space and only simple support, "ZIPPERS" can be economically arranged for practically any plant layout

SINCE 1901 S-A STEPHENS-ADAMSON MFG. CO.

For technical data, write for Bulletin 349.

STEPHENS-ADAMSON MFG. CO.
12 Ridgeway Avenue, Aurora, Illinois
Los Angeles, California • Belleville, Ontario

▲ For more details circle NED-78 E5 on enclosed inquiry slip ▲

SELF-STICKING SAFETY SIGNS with basic or special messages

Self - sticking accident prevention signs in standard sizes of 5 x 14 in., 3½ x 10 in. and 2¼ x 9 in. are available in both basic and special - purpose types. Either type can be used alone or in combination with other signs. Over 1000 different stock specific-purpose signs when combined with appropriate basic-purpose signs allow making up many thousands of safety messages. Signs are made of No. B-500 All-Temperature impregnated cotton cloth with temperature-resistant pressure-sensitive adhesive. They are mounted on individual Blue-Streak dispenser cards. Signs stick without moistening to any clean, dry surface. Free sample is offered by **W. H. Brady Co.,** Dept. NED, 727 W. Glendale Ave., Milwaukee 12, Wis.

▲ For more details circle NED-79 E5 on enclosed inquiry slip ▲

DEMAGNETIZERS operate on 110, 220 and 440 v

Magnetism which reduces life, accuracy and sharpness of cutting tools, can be removed by use of De-Mag demagnetizers. Demagnetization is instantaneous by

passing the tool or other magnetized object over its surface. Devices are made in sizes with 8¾ x 4⅞-in. and 18 x 12¾-in. surfaces. Former unit operates on single-phase 110-v current, has a stainless steel top and is equipped with a momentary switch. Larger units are available for 110-v single phase, 220-v single and three-phase and 440-v three-phase operation. They are equipped with pilot light, on-and-off switch and Bakelite top. Special units can be built up to a surface size of 52 x 28 in. Made by **Electric Motors Service Co.,** Dept. N, 347 Crescent St., Jamestown, N. Y.

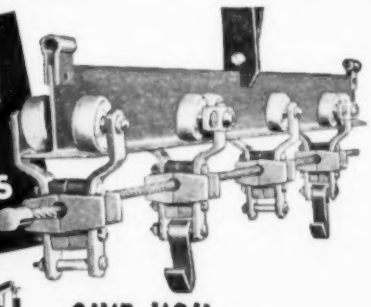
▲ For more details circle NED-80 E5 on enclosed inquiry slip ▲

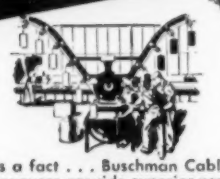
Forging Hammer

United Engineering & Foundry Co., Lobdell United Div.—Operating principle, design features and application data for the Nazel electro-pneumatic forging hammer are found in 20-page catalog. Self-contained unit features variable blow force and speed. Variety of models is described and their specifications and applications given.

▲ For more details circle NED-81 E5 on enclosed inquiry slip ▲

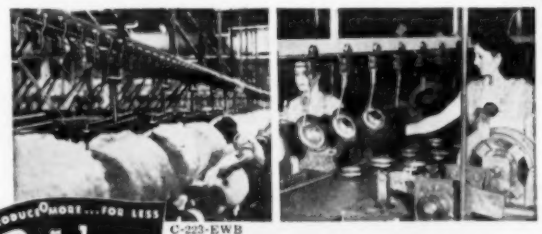
BUSCHMAN CABLE CONVEYORS





GIVE YOU...
BETTER PERFORMANCE
GREATER VERSATILITY
LOWER COST OPERATION

It's a fact . . . Buschman Cable Conveyors provide superior performance in today's overhead cable conveyor applications. Selection of pre-engineered designs for transporting products or parts through production processes or assembly operations. Lightweight all-bolted construction simplifies erection and makes future expansion or rearrangement rapid and economical. Learn how Buschman Cable Conveyors will do your job at lower cost. Write today for Catalog No. 40.



PRODUCE MORE ... FOR LESS Buschman Conveyors

C-223-EWB

THE E. W. BUSCHMAN CO.
4482 Clifton Ave. • Cincinnati 32, Ohio
REPRESENTATIVES IN PRINCIPAL CITIES

▲ For more details circle NED-82 E5 on enclosed inquiry slip ▲

CONTROL ABSOLUTE PRESSURE

Precisely to 0.01" Hg
W & T Aneroid Manostat

—Range: 3 to 60 inches of mercury absolute pressure.
— Adaptable to pressure or vacuum systems.

Type FA-149

Write today for Publication No. TP-12-A

WALLACE & TIERNAN INCORPORATED
PRECISION INSTRUMENTS AND ELECTRICAL MECHANISMS
25 MAIN ST., BELLEVILLE 9, N. J.
In Canada: Wallace & Tiernan, Ltd., Toronto

A-106

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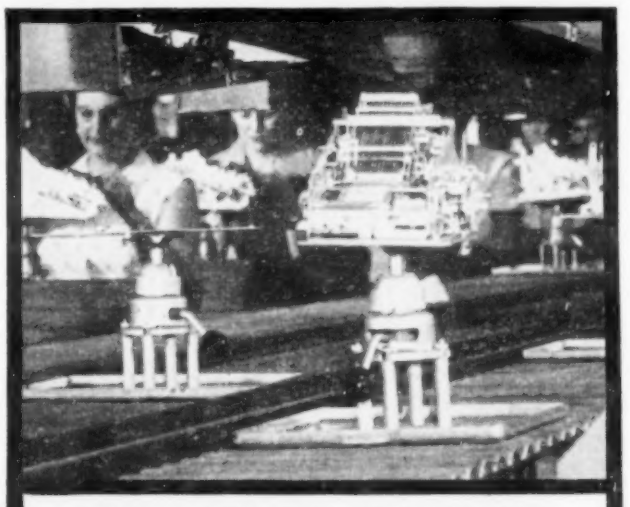

NO HOLDS BARRED AT BURROUGHS

PowRarm work positioners are shown here at the Burroughs Corp., Detroit. PowRarm holds set-ups at any desired angle, freeing both hands. They never become obsolete, no matter how often you re-tool. Before investing in special fixtures again, try PowRarm.

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NED-5

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9525 W. Irving Park Road,
Schiller Park, Ill. P. O. B. 56
wilton tool canada ltd., guelph, ontario, canada

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VALVES

BY-PASS, OIL-RELIEF PISTON TYPE, HYDRAULIC

STANDARD OR FLANGE MODELS

NON-CHATTERING
because the cylindrical piston closes off the port in a shearing manner . . . and does not seat abruptly against the body of the valve.

EXTREMELY SIMPLE
Just select pressure desired from 5 springs . . . INSTALL . . . NO FURTHER ATTENTION NEEDED.

For machine tool hydraulic mechanisms, oil-burning equipment, rams, presses and Diesel engines.

Pressures: 0 to 500 lbs.
Pipe sizes: ¼" to 2"
Bodies: cast iron or brass.
Pistons: brass, hardened or stainless steel.

Write on your letterhead for professional edition of FULFLO MECHANICAL DATA BOOK

FULFLO **THE FULFLO SPECIALTIES CO. Inc.**
PUMP AND VALVE MANUFACTURERS
BLANCHESTER, OHIO

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31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181
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33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190
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42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194

FOLD ON THIS LINE

45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199

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—USE THIS SLIP FOR MAY 1955 ISSUE ONLY—

E-5

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

Check Invested Capital Rating of Your Company

☐ Over $1,000,000
☐ $500,000 to $1,000,000
☐ $200,000 to $500,000
☐ $75,000 to $200,000
☐ Under $75,000

To Use this Self-Mailer . . . Just Fill It In, Fold, Seal and Mail . . . No Postage Needed

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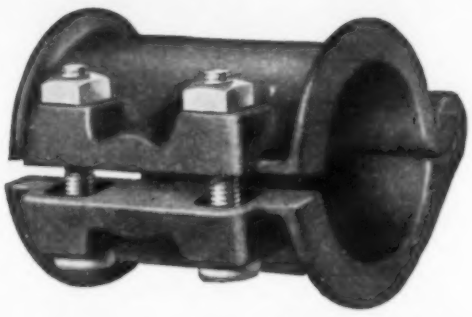
SKINNER-SEAL EMERGENCY PIPE CLAMPS

For Stopping Leaks in Pipe Lines



An instant, permanent repair under any operating condition. No pressure too high. Anyone can apply in a few moments. Made in all sizes, ½" to 12", for steel and C.I. pipe. Stocked by practically all supply stores.

M. B. SKINNER CO., SOUTH BEND 21, IND.

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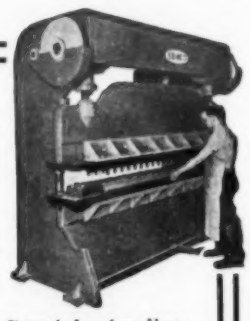
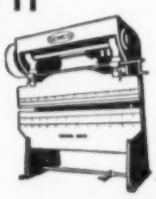
SEMCO PRESS BRAKES

For the Entire Sheet Metal Industry



For big jobs or small, requiring utmost accuracy there's a Low Priced SEMCO PRESS BRAKE made to serve you.

SEMCO has a wide range of PRESS BRAKES to meet your particular need.



For Special Applications and complete tooling requirements, SEMCO engineers will design and build to suit the need.

Send for NEW catalog illustrating newest models of Press Brakes and including Standard 90 Carbon Forged Steel Press Brake Dies.

SEMCO SERVICE MACHINE CO., INC.
ESTABLISHED 1919
202 Miller St., Elizabeth 4, N. J.

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Wow! This Electric Truck is about $1200 a year cheaper than Gas!

It's a fact—and user reports prove it—Lewis-Shepard Electrics save you hundreds, even thousands of dollars a year.

Just look at this Annual Cost Comparison.

LEWIS-SHEPARD Electric		Gas Truck
Model "J"—2000 lb. cap. @ 48" load length with 130" telescopic mast		2000 lb. cap. @ 48" load length with 130" telescopic mast
$480	Depreciation	$ 750
290	Maintenance Labor and Repair Parts	920
75	Power or Fuel	425
$845	TOTAL	$2,095

Send for Gas vs. Electric Cost Comparisons and Catalog No. 33.

LEWIS-SHEPARD®
The Master's Line
175 WALNUT ST., WATERTOWN 72, MASS.

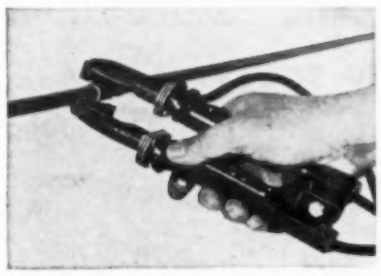
▲ For more details circle **NED-88 E5** on enclosed inquiry slip ▲

COOLANT SEPARATORS
magnetic type handle up to 100 gpm

Line of Delpark-Dings magnetic coolant separators is designed for use with honing, lapping, grinding, shaving, broaching and milling machines; metal roll forming mills; glass polishing operations and oil reclaiming processes. They remove metal particles by magnetic attraction and are usable for pre-filtration separation to reduce the load on the filter. Made in capacities up to 100 gpm by **Industrial Filtration Co.**, Dept. D-203, Lebanon, Ind.

▲ For more details circle **NED-89 E5** on enclosed inquiry slip ▲

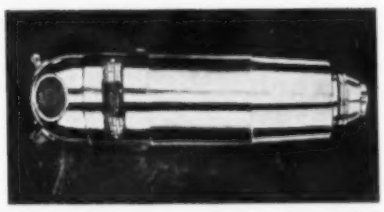
SOLDERING PLIERS
especially useful for tube fittings



Used in conjunction with model 105-C2 1000-w portable power unit, No. 10544 electric soldering pliers are used primarily for joining copper tubing fittings up to 1¼-in. size. Tool is also suitable for soldering heavy electric wire and cable and similar work. Operating from any convenient electric outlet, tool has pushbutton heat control and 10-ft leads. Made by **Wassco Electric Products Corp.**, 128 W. Cass St., Joliet, Ill.

▲ For more details circle **NED-90 E5** on enclosed inquiry slip ▲

POWER QUILL
has motor speed of 45,000 rpm



Latest power quill with motor speed of 45,000 rpm is designated the Super 60 and is capable of delivering ½-hp at load speed of 24,000 rpm. This is same speed at which earlier Super 50 model develops ¼-hp. The new power quill has all-steel precision ground and honed housing and accommodates the same collets and accessories as the Super 50 model. With machine tool mounts, it can be quickly set up on lathe, milling machine, grinder or other machine tool to finish to tolerances of 0.0001-in. Ground and honed collet chuck has maximum capacity of ¼-in. Made by **Precise Products Corp.**, 1346 Clark St., Racine 11, Wis.

▲ For more details circle **NED-91 E5** on enclosed inquiry slip ▲

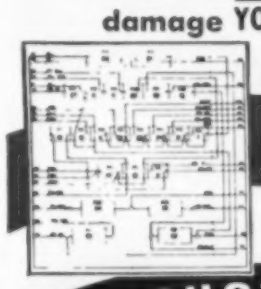
Now... a new Temperature Indicator-Controller by Fenwal

Fenwal's new *Series 540* is a remote Temperature Indicator-Controller that combines low cost with high accuracy over a range of 100° to 700°F. Designed for a wide variety of processing equipment, the new controller operates on a liquid-filled bulb and capillary system, with a bellows transmitting reponses to the indicating pointer. Setting pointer and bulb temperature pointer indicate against the same scale face, permitting "glance" comparison of both readings at a distance. Accuracy is maintained to within 3% over the 100°-700°F range. An adjustable differential can be varied between 0.8% and 4% of scale range. For details, **write for Bulletin MC-122. Fenwal Incorporated, 85 Pleasant Street, Ashland, Mass.**

Fenwal Controls Temperatures ... *Precisely*

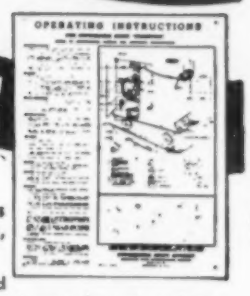
▲ For more details circle **NED-92 E5** on enclosed inquiry slip ▲

don't let inferior accessories damage YOUR SUPERIOR PRODUCTS



use printed **PLASTIC**

SCHEMATIC DIAGRAMS



INSTRUCTION CARDS

Plastic adds *strength, protection* and *sales impact* to instructions, charts, diagrams, etc., accompanying your products.

As plastic specialists, we are equipped to draw, design and *print on plastic sheet* any of your product operating and maintenance aids.

Your exact specifications will be met on selection of appropriate typefaces, colors, quantities, finished sizes (up to 29" x 29") plastic thicknesses (.015" to .125") and number and sizes of holes for attaching or mounting to your products.

send us your job requirements for a free and accurate estimate.

Allegheny Plastics, Inc.
Plastic Laminators, Printers and Fabricators Since 1936
51 Thorn Run Road, Coraopolis, Pa.

▲ For more details circle **NED-93 E5** on enclosed inquiry slip ▲

CM

HERC-ALLOY

THE ORIGINAL ALLOY CHAIN

- An all-purpose chain for use where safety is paramount.
- Offers highest resistance to impact loading.
- Individually tested to twice working-load limit and registered.

Sold in running lengths, slings and other special assemblies.

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK

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AN INDISPENSABLE FIRST-AID INSTRUMENT

G-S EYE SWEEP

Double Purpose

MAGNET AND LOOP

For removing metallic particles, dirt, chips, any foreign matter from the eye. **$2.50**

Magnetic tip easily picks up the smallest piece of iron or steel. Flexible loop is very convenient for removing cinders, dirt and non-magnetic particles.

Sterilization will not affect magnetic properties or loop. A hard rubber carrying case is provided with each G-S Eye Sweep.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

2701 W. Huntington St., Philadelphia 32, Pa.

RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

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New catalog – complete information on
M-R-C POWER TRANSMISSION BALL BEARINGS
with Synthe-Seal— lubricated for life

20 PAGES
8½"x 11"

Write for
FORM 1535
MARLIN-ROCKWELL CORPORATION
Jamestown, N. Y.

▲ For more details circle **NED-96 E5** on enclosed inquiry slip ▲

no fuss...no muss

WHEN YOU BEND WITH A PEDRICK

Pipe, tube and structural bending with Pedrick Production Benders is the smoothest, simplest, cleanest operation you can imagine. Even usually difficult bends are a cinch, and the costs—*really low!*

Write us your bending problem—we think we can supply a cost-cutting answer. PEDRICK TOOL & MACHINE CO., 3640 N. Lawrence St., Philadelphia 40, Pa. Dept. 6.

FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

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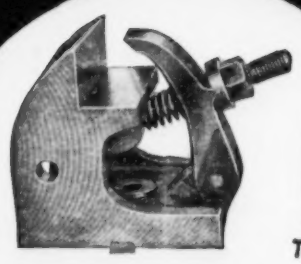
CUT SET-UP COSTS HUNDREDS OF WAYS WITH



HART MILLING FIXTURES

"Masters of A Thousand Set-ups"

Eliminate the need for many special expensive jigs and fixtures.

You will save time and money on most set-ups with Hart Milling Fixtures. They hold round, hexagonal, octagonal or square stock, for miller, shaper, drill press and tapper; they reduce set-up time and speed production. Hart Milling Fixtures are made in four useful sizes, and designed to be used in horizontal or vertical position. Let us send you full description and prices.

Write for illustrated folder

WALTER W. FIELD & SON, INC.
39 Hayward St., Cambridge 42, Mass.

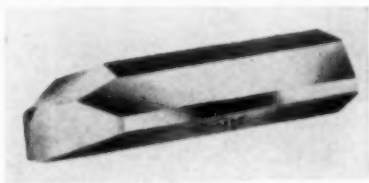
▲ For more details circle **NED-98 E5** on enclosed inquiry slip ▲

FOLDING PALLET CONTAINER
fabric gives protection to contents

Designed for handling bulk solids, this palletizing container collapses flat with base when not in use or for return shipment. When tiering posts are set up, the fabric is raised to form a container which can be used for shipment, handling or storage of bulk solids, granules, powders, small and light parts and many other items. Container can be canvas, duck, rubber, plastic or water resistant material. It is offered with zipper, straps or other type closures for protection of contents; or with open top with hook-on container. Aluminum or steel base and tiering are supplied. Standard sizes are 32 x 40 x 24 in. and 40 x 48 x 24 in. Made by **Paltier Corp.,** 1705 Kentucky St., Michigan City, Ind.

▲ For more details circle **NED-99 E5** on enclosed inquiry slip ▲

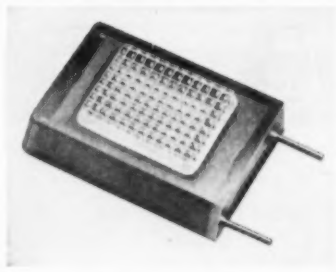
WHEEL DRESSING TOOLS
design prevents loose diamonds



Metal alloy M-28 used in Coldset grinding wheel form dressing tools is combined with a setting process that guards against loose and lost diamonds, even under the most difficult operating conditions. Each shaped tool has diamond radius as specified within 0.0001-in. and center line of radius and locating flats co-linear within 0.0005-in. Made by **American Coldset Corp.,** Dept. ND, 87 Court St., Paterson, N. J.

▲ For more details circle **NED-100 E5** on enclosed inquiry slip ▲

PHOTO-CONDUCTIVE CELL
handles up to 0.3-w power



Need for electronic amplifier, vacuum photocell and direct current power supply is eliminated in this photo-conductive cell. It is designed to operate relays and other devices on voltages from 1.5 to 110 v with incident light values from daylight (1000 ft-c) to moonlight (0.02-ft-c). Sensitivity is 0.4-amp per lumen, and it handles power up to 0.3 w. Made by **Canadian Marconi Co.,** Dept. NED, 2442 Trenton Ave., Montreal 16, P.Q., Canada.

▲ For more details circle **NED-101 E5** on enclosed inquiry slip ▲

It's an important factor in selecting the right castings.

The high strength, easy machinability and extreme lightness of Well-Cast *lightweight* castings reduce human fatigue . . . decrease operating costs.

Let us help you *today* to select the Well-Cast casting, aluminum or magnesium, for your needs.

Catalog No. 53 on request.

Well-Cast MAGNESIUM, ALUMINUM AND BRONZE CASTINGS
Well-Made WOOD AND METAL PATTERNS
THE WELLMAN BRONZE & ALUMINUM CO
Dept. 15, 12800 Shaker Boulevard • Cleveland 20, Ohio

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HOMER MAGNETIC SHEET SEPARATORS

Make it easier, faster and safer for employees to handle round, square, nested, irregular or odd shaped stacks of steel sheets—in shearing, welding, pressing, riveting or similar production operations. Prevent double feeding of sheets—protect dies and machinery. Oily, polished, enameled or painted sheets separated without prying, scratching or marring the surfaces.

WRITE FOR BULLETIN SS-210

THE HOMER MANUFACTURING CO., INC.
DEPT. 1-25 LIMA, OHIO

▲ For more details circle **NED-103 E5** on enclosed inquiry slip ▲

▲ For more details circle **NED-104 E5** on enclosed inquiry slip ▲

PROTECTION
Against Overloads & "Shorts"
ECON®
DUAL-ELEMENT cartridge fuses

Eighteen strategically located district offices assure electrical wholesalers and fuse users of Economy's complete readiness to solve your circuit protection problems.

ECON Dual-Element Fuses, in addition to providing dependable motor and branch line protection, are an effective guard against high temperatures and resulting hazards. In knife and ferrule types, 0 to 600 amperes, 250 and 600 volts. Underwriters' Laboratories, Inc. approved. Write for New Econ Catalog S-60 or for literature on other type fuses.

Your Electrical Wholesaler has ECON Dual-Element Cartridge Fuses in stock

ECONOMY FUSE & MANUFACTURING CO.
2717 GREENVIEW AVE. • CHICAGO 14, ILLINOIS

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ELECTRIFY YOUR CRANES AND HOISTS FOR SAFER, MORE DEPENDABLE OPERATION.....

When you power your cranes and hoists with FEEDRAIL TROLLEY BUSWAYS you replace dangerous open wiring and hazardous trailing cables with a safe, efficient electrical distribution system that's tops for dependability. Current-carrying conductors are safely enclosed in steel housings. Power take-off is from smooth rolling trolley outlets. You'll experience fewer electrical accidents — less maintenance — faster more efficient materials handling. *For details, write Dept. D-5.*

Safe electric power where you want it—when you need it for —
Cranes and Hoists
Portable Tools and Machines
Moving Test Lines
Assembly Lines, etc.

ELECTRIC FEEDRAIL®
Never Becomes Obsolete
CHS-1
FEEDRAIL CORPORATION
Subsidiary of Russell & Stoll Company, Inc.
125 BARCLAY STREET · NEW YORK 7, N. Y.
SPECIALLY QUALIFIED REPRESENTATIVES IN PRINCIPAL CITIES
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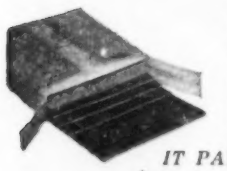
ISOMODE* PADS...

money-saving "shoes" for busy machine feet!

Now you can successfully isolate vibration, muffle plant noise, and cut down maintenance bills by using low-cost Isomode Pads.

Made of DuPont Neoprene, these pads resist oil and water, actually last for years. In thousands of installations, they have already proved their ability to swallow up troublesome machine shock and vibration. Even that of giant punch presses.

Installation is quick, easy. And there's no waste – you use only as much as you need. Simply cut an Isomode Pad to size and install under equipment. Results: Machines stay put without bolting, floors and building remain undamaged, working conditions are improved, and machine maintenance is cut.



Try a package of Isomode Pads and see. Write for full details and price list. **Trade Mark*

IT PAYS TO KEEP A PACKAGE ON HAND

THE **MB** MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.
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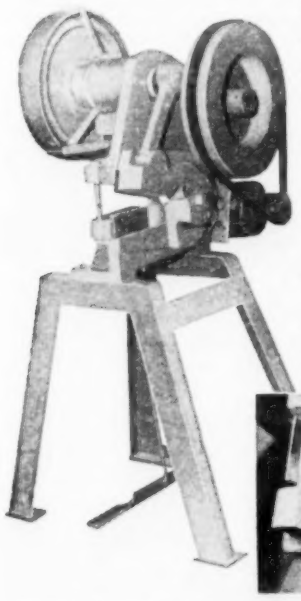
Bateman Angle & Flat Iron **Shear**

IDEAL FOR THE USERS OF SMALL ANGLES OR FLATS



- No grinding necessary after cut.
- Cut angles up to 2"x2"x3/16" and flats up to ¼"x4".
- Flywheel with gear drive for power with a small motor.
- A one stroke cycle clutch operated by either hand or foot.
- With clutch open, will make 44 strokes per minute.
- Made of high grade cast iron, hardened clutch and clutch pin, shear steel blades.
- Blades can easily be replaced by taking out several screws.
- From floor to top of machine—56" with stand. Floor to shear blade—36". Floor space required —24"x27".
- THIS MACHINE GUARANTEED FOR WORKMANSHIP AND DURABILITY.
- Price of shear, without stand or foot pedal—$350.00. With motor and switch—$450.00. With stand and foot pedal—$375.00.

Shear has punch attachment that will punch ⅜" through 3/16" material. $45.00 extra.

¾ HP. motor required for power. We furnish 2-groove motor pulley and 2-belts when ordered without motor.

Shipping weight approx. 485-lbs. without stand, 560-lbs. with stand.

BATEMAN FOUNDRY & MACHINE CO.
MINERAL WELLS, TEXAS
▲ For more details circle **NED-108 E5** on enclosed inquiry slip ▲

HYDRAULIC VALVE
features large oil passages

All cross-sectional areas of oil passages in this three and four-way hydraulic valve are equal to or greater than the cross-sectional area of a ¾-in. ID pipe for which the valve is designed. This minimizes back pressure and accomplishes a "feathering" characteristic when used with hydraulic motors. Valve is smooth in action from "hold" position to full application of oil at 2000 psi. Made by **Century Engineering Co.**, 467 W. Main St., Waukesha, Wis.

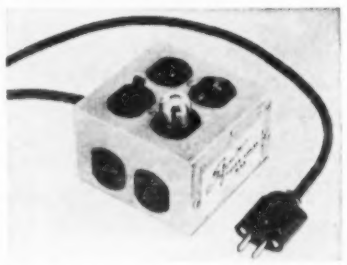
▲ For more details circle **NED-109 E5** on enclosed inquiry slip ▲

FOG NOZZLE
for industrial plant fire protection

Economy-priced model NIF-15 fog nozzle is especially designed for use in combatting industrial plant fires. Flow of water through nozzle can be changed quickly from straight stream, to fog and to shut-off with a twist of the wrist. Fog spray patterns from 0 to 150 degrees are readily selected. Fire-smothering water fog extinguishes fire with minimum of water damage. Made by **Fyr-Fyter Co.**, 220 Crane St., Dayton 1, O.

▲ For more details circle **NED-110 E5** on enclosed inquiry slip ▲

MULTIPLE OUTLET BOX
both wires of unit are fused



Primary feature of the Safcorde portable multiple outlet box is that both wires are fused, eliminating nuisance of blown fuses at switch box. The outlet box is useful in all types of laboratories, for testing work and the use of electric hand tools at remote locations. Flick of switch provides complete control without pulling individual cords. Unit consists of six heavy duty outlets, control switch, pilot light and fuses for operation on 115/230 v ac or dc. Assembly is in 5 x 5 x 2½-in. steel housing with gray hammertone finish and has 10-ft or longer cord. Made by **Kenru Co.**, Dept. KR-11, P. O. Box 121, Parsippany, N. J.

▲ For more details circle **NED-111 E5** on enclosed inquiry slip ▲

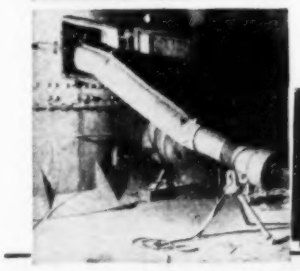
Drive out
FOUL AIR
Blow in
FRESH AIR
with Coppus Type A Ventilator

Assure greater safety, comfort for workers... get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 405 Park Avenue, Worcester 2, Mass.

MANHOLES made safe for workers' entrance within minutes.



BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

▲ For more details circle **NED-112 E5** on enclosed inquiry slip ▲

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC

Zip away **SCALE RUST PAINT**

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for the money-saving facts.

AURAND MFG. & EQUIP. CO.
1210 Ellis St. · Cincinnati 23, Ohio
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CM Lodestar®

ENTIRELY NEW... differently NEW

Built to serve you for its normal life without maintenance

Lodestar is the first truly "heavy duty" version of the small electric hoist. It will serve you without costly maintenance or interruptions in your work schedules.

FLEXIBLE LINK CHAIN

CAPACITIES: from ⅛ to 1 ton. Single and 3 phase. ¼ ton model weighs only 51 pounds.

PUSH BUTTON CONTROL

$149.50 and up

WRITE US: Or call your CM distributor for literature, prices and quick delivery from stock.

CHISHOLM-MOORE HOIST DIVISION
Columbus McKinnon Chain Corporation
Tonawanda, New York
Regional Offices: New York, Chicago, Cleveland
In Canada:
McKinnon Columbus Chain Limited, St. Catharines, Ontario

CM HOISTS AND CHAIN

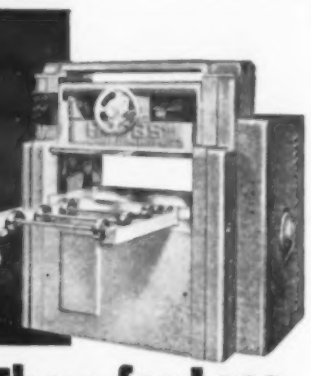
▲ For more details circle **NED-114 E5** on enclosed inquiry slip ▲

For Electrical Insulating

SELF-STICKING
PERMACEL® TAPES
Superior self-sticking tapes may help you do your job better
... write Permacel Tape Corporation, New Brunswick, N. J.

▲ For more details circle **NED-115 E5** on enclosed inquiry slip ▲

Doilies, Coasters, Soft Floor Tiles, Collars, Cuffs, Pockets, Labels, Girdles, Brassieres, Cotton Buffs



You Can Cut Them for Less
WITH A
HOBBS TRI-POWER DIE PRESS

This machine die-cuts cleanly and accurately through multiple layers. Continuous, jogging, or single cycle operation, as desired (combined features exclusive). Safety switch prevents overloading of machine. Optional equipment assures safety of operator. Many other features, including economical electric clutch and modern electric controls. Used by many textile, paper and plastics converters.

Write for Bulletin C514.

HOBBS MANUFACTURING CO.
41 Salisbury St., Worcester 5, Mass.
New York Office — 132 Nassau St.
Chicago Office — 549 W. Washington Blvd.

WINDERS • HAND & POWER SHEARS • DIE PRESSES
SLITTERS • CORNER CUTTERS • LABEL CUTTERS

For more details circle NED-116 E5 on enclosed inquiry slip

WHEN LIGHTS GO OUT EXIDE® LIGHTGUARDS® GO ON INSTANTLY...AUTOMATICALLY!

NEW MODEL M

Whenever normal lighting is interrupted—no matter what the reason—you get adequate emergency lighting INSTANTLY. Your customers and employees are safeguarded against injuries; property damage, pilferage, loss of process control is minimized. Exide Lightguards are UL-approved and can be plugged in anywhere. Operates instantly—each lamp illuminates up to 10,000 sq. ft. Exide battery in one lamp unit provides power for more than 8 hours of continuous lighting. Once normal power is restored, automatic controls recharge the dependable, long-life, trouble-free Exide battery.

WRITE for facts on why Exide Lightguards guarantee more protection for every dollar you invest in such equipment.

Exide INDUSTRIAL DIVISION,
The Electric Storage Battery Co., Philadelphia 2, Pa.

For more details circle NED-117 E5 on enclosed inquiry slip

RELIANCE SNAP RINGS
SLASH PRODUCTION COSTS and SAVE MATERIAL

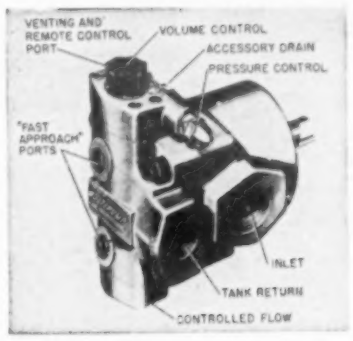
AVAILABLE IN MANY SECTION SIZES AND VARIOUS GAP DESIGNS

SEND TODAY FOR FREE ENGINEERING BULLETIN 4K/3

EATON MANUFACTURING CO.
RELIANCE DIVISION
OFFICES and PLANTS • MASSILLON, OHIO
Sales Offices
NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

For more details circle NED-118 E5 on enclosed inquiry slip

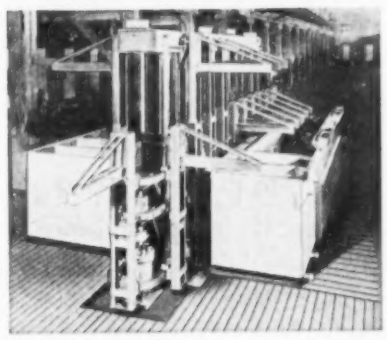
VARIABLE VOLUME PUMP
for 1000-psi hydraulic service



Variable volume at constant speed, or constant volume at variable speed can be delivered by the Multipump, a vane type hydraulic unit designed for 1000-psi continuous duty. It incorporates an independent fingertip volume control and a compensator control that functions at all volumes. Three basic sizes have capacities of 5, 15 and 25 gpm at 1200 rpm. Once delivery is set, it remains constant within ±5 per cent, regardless of pressure fluctuations or variations in pump shaft speed. Setting can be remotely controlled by adding a remote control valve and connecting it to the remote control port. Provision for large quantity of low pressure oil is made by incorporation of a "fast approach" port. Variable speed, constant flow Multipumps are available for approximate speed ratios of 2:1, 3:1 and 4:1. Made by **Denison Engineering Co.**, 1152 Dublin Rd., Columbus 16, O.

For more details circle NED-119 E5 on enclosed inquiry slip

AUTOMATIC PLATING MACHINE
adaptable to single or double row plating and processing



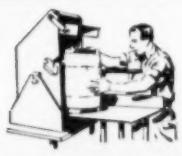
Engineered around an "automation concept" that will enable automatic loading and unloading, the Stevadoer automatic heavy duty plating and processing machine can be adapted to single or double row plating and processing. It can handle almost unlimited rack sizes and extreme weights, yet requires only a minimum amount of height and floor space.

Delayed set-down mechanism which provides independent timing in one or more tanks can be incorporated. Additional transfers can be provided as needed. Through the use of a special timer control, a carrier arm can be made to skip any tank or operation. A catwalk between processing tanks and mechanism on two-row machines permits safe and easy addition and removal of anodes, lubrication and inspection.

No moving mechanism is over the solutions. All lift and horizontal motion is by hydraulic power. Controls permit independent adjustment of acceleration and transfer speeds. Made by **Frederic B. Stevens, Inc.**, 18001 Eighteenth St., Detroit 16, Mich.

For more details circle NED-120 E5 on enclosed inquiry slip

LOWER COST PARTS HANDLING IN THREE EASY STEPS
with the new NesTier Rollover Hopper

1 
Parts go directly to production area *in original shipping container.* Box or keg, top removed, is placed in NesTier Rollover Hopper.

2
Retaining panel is lowered . . . unit rotated . . . and parts fall into hopper tray. Adjustable gate regulates rate of flow.

3
Now . . . a continuous flow of parts out of original shipping container is supplied to work in convenient hopper form . . . *without rehandling.*

C-239-DN

Write today for Bulletin ROH-201

NESTIER®

THE CHAS. WM. DOEPKE MFG. CO., INC.
8884 Blue Ash Rd. • Rossmoyne, Ohio

For more details circle NED-121 E5 on enclosed inquiry slip

BREEZE BUILDS BETTER BELLOWS

Breeze bellows are job-engineered for tough applications where ordinary formed bellows cannot meet the requirements. Custom-building permits more convolutions per inch for controlled flexibility; extra strength is *precision-welded* into each diaphragm. Spring rate is exact.

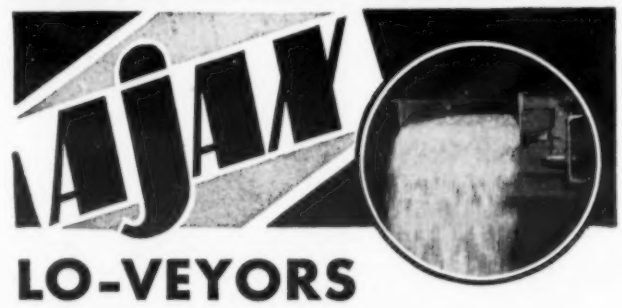
Where necessary, Breeze can solve difficult vibration problems through special design, using plate-to-plate construction of proper metal and varying thickness.

Breeze *valve-sealing bellows* provide a tight packless seal with required flexibility. Breeze *instrument bellows* meet pressure sensing needs from vacuum to 2000 psi. As *expansion joints* and *flexible connectors* they can withstand temperatures to 1400° F. All are job-engineered.

We can also provide stainless steel *formed* bellows for operations where custom-welded bellows are not required. Our engineers invite your inquiries.

BREEZE CORPORATIONS, INC.
700 Liberty Avenue, Union, New Jersey

For more details circle NED-122 E5 on enclosed inquiry slip



LO-VEYORS

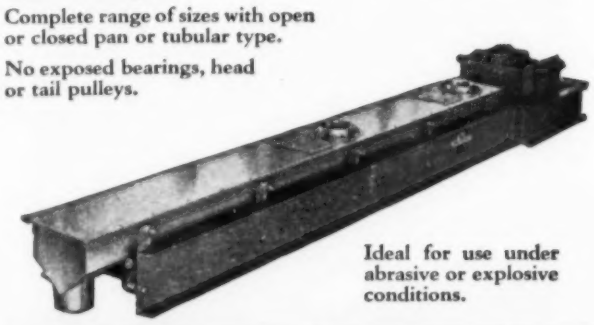
Speed up moving of bulk materials.

Easily installed on the floor, below the floor or suspended from walls or ceilings.

Complete range of sizes with open or closed pan or tubular type.

No exposed bearings, head or tail pulleys.

CUT COSTS



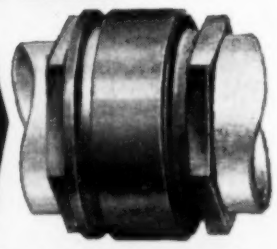
Ideal for use under abrasive or explosive conditions.

AJAX FLEXIBLE COUPLING CO. INC.
Westfield, N. Y.

For more details circle NED-123 E5 on enclosed inquiry slip

Cut Coupling Size & Weight with

RUBBER TECK'S
RIGID, LIGHTWEIGHT, STAINLESS STEEL
DUCT CONNECTOR



Proven and accepted in the aviation industry because of its compactness and weight economy. Now available for all industries requiring rigid but lightweight connectors. Easy to install. Gases, liquids or semi-liquids can be handled to advantage. Available in aluminum for tube sizes ¼" to 2½" and in stainless steel ¼" to 4" O.D.

OTHER RUBBER TECK PRODUCTS: Flexible Breakaway Connectors • Duo-Seals • Flexible Hot Air Duct Connectors • Flexible Fluid Line Connectors

Write for data sheets on the complete line

RUBBER TECK, Inc. GARDENA, CALIFORNIA

ENGINEERING SERVICE REPRESENTATIVES:

RUBBER TECK SALES & SERVICE CO.
8479 Higuera St., Culver City, Calif.
Texas 0-6836
5439 Harford Rd., Baltimore, Md.
Clifton 4-9671
60 East Bridge St., Berea, Ohio
Berea 4-7837

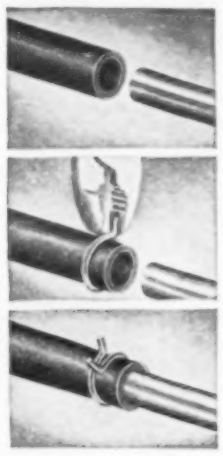
THOMSON ENGINEERING SERVICE
554 Summit, Fort Worth, Texas
723 Broadway, Wichita, Kansas
4378 Lindell, St. Louis, Missouri

RANDALL ASSOCIATES, INC.
Room 203, White Bldg.
Seattle, Wash.

For more details circle NED-124 E5 on enclosed inquiry slip

Get Around Hose Fastening Problems

quickly . . . easily . . . economically



Compare the time and labor-saving advantages of this simple fastener and you'll soon see why more and more leading manufacturers specify Corbin Self-tightening Hose Clamps for easy, economical hose connections.

Corbin Hose Clamps can be installed quickly and easily . . . eliminate the need for nuts, bolts or screws . . .tighten automatically. Made of high quality heat treated spring steel, they resist rust and corrosion . . . never lose their spring or tension . . . grip evenly and securely, even when used with irregular castings, tube or hose.

Try them and see for yourself. Corbin Hose Clamps are made in a variety of sizes to fit hoses from 3/8" to 2 5/8" O.D. Write for further details. Ask for Engineering Bulletin HC-17. Corbin Hose Clamp Division, The American Hardware Corporation, New Britain, Conn.

For more details circle NED-125 E5 on enclosed inquiry slip

ALUMINUM SAFETY LADDERS grip floor when weight is applied

Stop-Step aluminum ladders are built of square aluminum tube and heavy gage sheet, welded into a rigid unit with a broad base. Made with from two to six steps, they roll on retractable ball bearing casters, yet lock firmly to any type of floor surface when weight is applied. Anchor cup on each leg is edged with a floor-gripping plastic extrusion which prevents skidding and offers non-conductive insulation. Ladders have nonslip safety treads, optional handrails for either or both sides and optional double-size top steps on models with three or more steps. Models available offer standing heights from 18 to 54 in. Made by **Cramer Posture Chair Co.**, Dept. NE-1, 1205 Charlotte St., Kansas City 6, Mo.

For more details circle NED-128 E5 on enclosed inquiry slip

HIGH-STACKING FORK TRUCKS in 1500 to 3000-lb capacities and maximum lifts of 130 in.

Line of battery-powered high-stacking tilting fork hand trucks includes units with 1500, 2000, 2500 and 3000-lb capacities, on 24-in. load center. Equipped with Hi-Lo telescopic channel uprights, truck provides free lift of 64 in. with 83-in. overall height and maximum fork height of 130 in. For highway truck loading, overall height of 68 in. is also standard and provides free lift of 49 in. with maximum fork lift of 100 in.

Single-lift (nontelescopic) models with maximum lifts of 66½ and 51½ in. are available as well. Tilt of 10 degrees back and 3 degrees forward is accomplished through double-acting cylinder which rigidly supports uprights and load at any tilted position. Heavy duty motor with gear pump provides hoisting and tilting power through oil hydraulic system. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

For more details circle NED-129 E5 on enclosed inquiry slip

5414

HOW DO YOU THREAD A PRECISION HOLE?

If your operation involves precision threading of precision holes, meet the

HAMILTON SMALL HOLE SUPER SENSITIVE PRECISION TAPPING MACHINE

Handles the smallest and finest tap to 10-32 inclusive.

Spindle idles in reverse, changes rotation instantly as pressure is applied to tap, reverses instantly as pressure is released.

Taps to the very bottom of blind holes without risk of tap breakage.

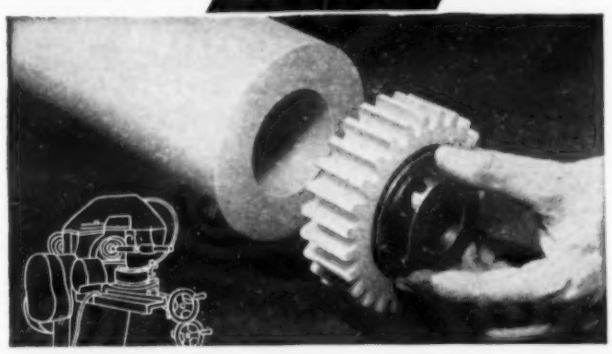
WANT COMPLETE FACTS?

Write for FREE Hamilton Bulletin No. 5414. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-131 E5 on enclosed inquiry slip

POLYPENCO® NYLON SHAPES



Save with nylon tubular bars!

- Get nylon's advantages economically in gears and rollers by making outer sections from tubular bars.
- Make bearings, bushin s, packings, and other wear parts with minimu n waste of nylon.
- Use metalworking tools . . . end high tooling cost.
- Sizes from 2" to 10" O.D. with 3/8" to 1½" walls.
- Uniform high quality . . . technical help.

SEND FOR NEW BULLETIN ON NYLON SHAPES

The POLYMER CORPORATION of Penna. • Reading, Penna. In Canada: Polypenco, Inc., 2052 St. Catherine W., Montreal, P.Q.

POLYPENCO® NYLON
... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)
*trademark for DuPont tetrafluoroethylene resin

For more details circle NED-126 E5 on enclosed inquiry slip

RELIEVE EMBRITTLEMENT with a DESPATCH "RS" OVEN

This Despatch RS-3 oven is used 16 hours a day at temperatures up to 550° F. Installed at the St. Paul, Minn. maintenance shops of Northwest Airlines, it is used in several important baking procedures. This includes stress relief from welding as well as relief of hydrogen embrittlement from plating on crank cases, landing gears, couplings, propeller shafts, knuckle pins, brake discs and other parts.

Specifications:
Despatch RS-3 Oven, 48" x 48" x 72" Inside. Electric: 17 or 26 KW; Gas: 83 CFH. 22 ga. steel with 3" or 5" Rockwood insulation.

Wherever electroplating is done, there's a Despatch Oven available for relief of embrittlement. Physical properties of the steel are largely restored and hydrogen is substantially removed by the heating process. Plated parts are usually baked from 1 to 5 hours at 375°-650° F. It is recommended that the baking operation begin immediately after plating and before the plated surfaces have been otherwise treated.

Write for fully illustrated No. 200 Bulletin

DESPATCH OVEN CO. Established in 1902
DESPATCH OVEN CO.
325 Despatch Building
Minneapolis 14, Minn.

For more details circle NED-130 E5 on enclosed inquiry slip

Save Costly Regrinding!

Anderson
NEW, IMPROVED HAND SCRAPER

After the original regrinding most users of this new Anderson hand scraper find that only honing is necessary. Judge for yourself: Order as many Model 5-D scrapers as you want. We'll send them promptly. Use them a full week . . . if they don't live up to all your expectations, send them back to us for refund.

Faster Cutting	with high speed steel blades...$5.80
Easier to use	with carbide-tipped blades..$8.50
Just the Right Spring	for rubber bumper shown below..$1.50
Palm Fitting Grip	
Light in Weight	
18"-20"-22" Lengths	

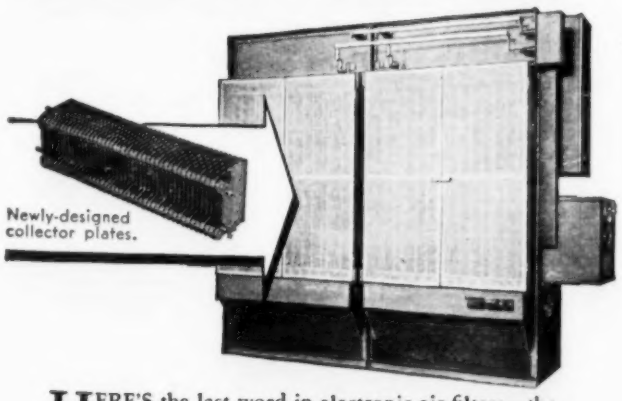
ORDER AS MANY AS YOU NEED — MONEY BACK GUARANTEE

Indicate choice of high-speed steel or carbide-tipped blades, and 18", 20", or 22" lengths. We suggest you include rubber bumpers in your order. Write today!

ANDERSON BROS. MFG. CO.
1907 Kishwaukee St. • Rockford, Ill.

For more details circle NED-132 E5 on enclosed inquiry slip

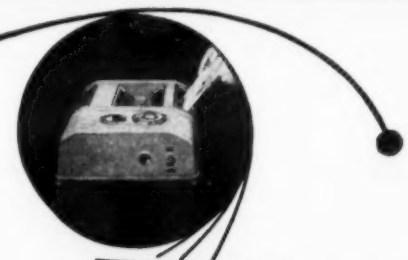
NEW Electro-MATIC AIR FILTER



HERE'S the last word in electronic air filters—the Model F ELECTRO-MATIC, which maintains continuous high efficiency through constant self-cleaning. Newly-designed collector plates increase surface area 53%. This further reduces possibility of dust build-up, and slows down air velocity between plates by 25%. No time out for washing—Model F ELECTRO-MATIC keeps itself at peak efficiency around the clock, around the calendar. Write today for Bulletin 250.

AAF herman nelson
American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-127 E5 on enclosed inquiry slip



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For more details circle NED-133 E5 on enclosed inquiry slip

NEW! TRAFFIC "COP" CONTROL!

Regulates flow, prevents tie-ups on converging conveyor lines

Rapistan's new conveyor traffic controller eliminates pile-ups and jams at junction of converging lines of live roller or belt conveyor. Cam constructed spring arms keep flow smooth and even, alternately feeds boxes, bags or packages into common line. Compact unit bolts onto flanges of converging lines, needs no floor space. Two sizes: for packages to 12" and 15 lbs., for packages to 30" and 100 lbs.

FREE new 16 page Catalog of Rapistan conveying equipment. Or write for "Field Reports" showing new handling ideas in your specific industry.

The RAPIDS-STANDARD CO., Inc.
511 Rapistan Bldg.,
Grand Rapids 2, Mich.

Rapistan — BETTER CONVEYING EQUIPMENT

▲ For more details circle **NED-136 E5** on enclosed inquiry slip ▲

Randall EXCLUSIVE FORMULA GRAPHITED BRONZE BUSHINGS

... FOR ASSURED LUBRICATION

When bearings are subject to neglect, hard to lubricate, or the shaft turns too slowly to maintain a proper oil film, get assured lubrication protection with Randall's exclusive graphited bearings. They are available in many styles of grooved or plug designs from more than 800 commercial stock size bearings or made to blueprint specifications.

Ask your area distributor for complete information on Randall's complete line of graphited bearings or write direct to the factory.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR
GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

Randall

RANDALL GRAPHITE BEARINGS, INC.
1007 S. Greenlawn Avenue, Lima, Ohio

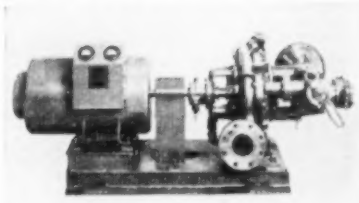
▲ For more details circle **NED-137 E5** on enclosed inquiry slip ▲

POWER SQUARING SHEARS will stall, not break, on overload

Silent herringbone gearing, electric clutch, centralized lubrication, triangulated ram and box type bed are features of this redesigned power squaring shear. It is engineered to stall rather than break on overload. The underdriven all steel machine has a capacity of 10-gage mild or stainless steel, cutting length of 73 in. and shearing speed of 80 surface fpm. Air pressure required is 60 to 200 lb and motor required is 5 hp, 1800 rpm. Made by **Diamond Machine Tool Co.**, 5111 Coffman-Pico Rd., Pico, Calif.

▲ For more details circle **NED-138 E5** on enclosed inquiry slip ▲

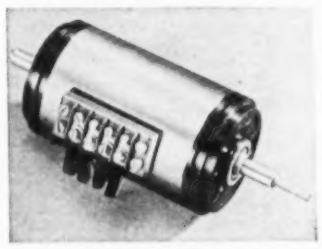
TURBO-GENERATOR SETS sizes range from 3.75 to 62.5 kva



Consisting of a Coppus type TF steam generator connected to an Electric Machinery & Mfg. Co. 1800-rpm packaged generator by a Falk flexible coupling, line of single and three phase alternating current generator sets are usable for lighting or power on an emergency or regular basis. Ratings are 3.75 to 62.5 kva. These compact units are shipped ready-to-install and require no switchboard. Offered by **Coppus Engineering Corp.**, 405 Park Ave., Worcester 2, Mass.

▲ For more details circle **NED-139 E5** on enclosed inquiry slip ▲

MAGNETIC CLUTCH designed for use on servo systems



Designed for servo system applications requiring the possibility of engagement or disengagement of either one or both shafts from a single input shaft, this precision electro-mechanical component is a magnetic clutch. Two magnetic coils and two sets of couplings are enclosed in single housing. Functions of the shafts can be reversed so that outputs can be used as inputs, thus permitting the selection of either of two input rotations to be transmitted to a single output shaft. Made by **Sterling Precision Instrument Corp.**, Instrument Div., Dept. NED, 34-17 Lawrence St., Flushing 54, N. Y.

▲ For more details circle **NED-140 E5** on enclosed inquiry slip ▲

ILLUMINATED MAGNIFIER for inspection and assembly

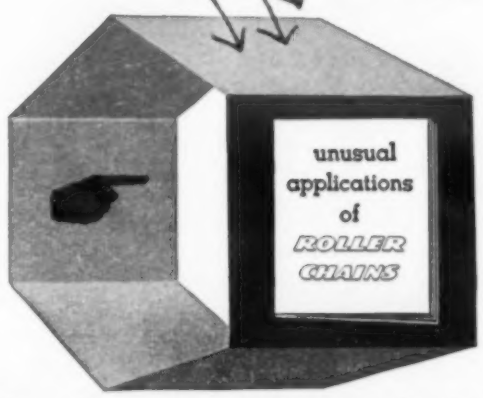
Operator has both hands free. Complete unit including adjustable stand, with precision wide-field lens designed for use at "normal" working distance from eyes. $13.50. See complete line of industrial magnifiers $1 to $25, stocked by leading industrial suppliers. Bausch & Lomb Optical Co. 51641 Bausch Street, Rochester 2, New York.

Write today for tell-all handbook and catalog, "INDUSTRIAL MAGNIFIERS, HOW TO CHOOSE AND USE THEM"

BAUSCH & LOMB
Industrial Magnifiers

▲ For more details circle **NED-141 E5** on enclosed inquiry slip ▲

for the IMAGINATIVE designer

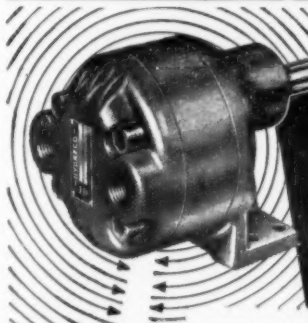


To the machine designer who likes to use imagination . . . who seeks the unusual as a path to cutting costs or improving machine performance . . . this informative handbook is an important aid. It pictures and describes many unusual ways in which roller chains were used to solve drive, conveyor and timing problems. If you are this type of designer, send for your copy of Bulletin No. 492. Chain Belt Company, 4686 W. Greenfield Ave., Milwaukee 1, Wis.

CHAIN BELT COMPANY

▲ For more details circle **NED-142 E5** on enclosed inquiry slip ▲

HYDRECO Oil Power FLUID MOTORS for RUGGED SERVICE



HYDRECO *Pressure-Balanced* Gear-Type Fluid Motors are built *better* to last longer, to operate efficiently at all speeds and to stand up under gruelling, shock-load service. HYDRECO Fluid Motors start, stop and reverse instantly, operate at an infinite variety of speeds, can even be stalled without damage . . . they are compact and efficient and develop high torque on starting.

Find out why the makers of America's leading hydraulically-equipped Materials Handling, Earth Moving and Industrial Machinery specify HYDRECO Fluid Motors for Rotary Power Transmission.

Write for HYDRECO Bulletin No. 139-A for full details on Constant Torque (Variable Horsepower) Fluid Motors. It's Free!

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222nd STREET • CLEVELAND 17 • OHIO
INTERNATIONAL SALES OFFICE, 90 WEST ST., NEW YORK 6.

▲ For more details circle **NED-143 E5** on enclosed inquiry slip ▲

UNITABLE® BELT CONVEYOR

For Assembly - Inspection - Packaging

The most ADAPTABLE portable conveyor you can find. Exclusive unitized design 10' to 80' lengths. Write for UNITABLE Bulletin now.

CONVEYOR SPECIALTY COMPANY INC.
37 Newport Avenue
North Quincy 71, Mass.

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Pre-Set Control

with this APCO MOSSBERG T-Handle Torque Wrench

There's no chance for costly errors with Apco Mossberg T-Handle Torque Wrenches. They are pre-set at the factory to any torque you desire, from 8 to 40 inch pounds. When torque limit is reached, wrench clicks and will not torque beyond this predetermined load.

Get the facts on Apco Mossberg's complete line of torque tools designed to meet industrial and military requirements. Apco Mossberg Company, 161 Lamb Street, Attleboro, Massachusetts.

APCO MOSSBERG COMPANY
ATTLEBORO, MASS.

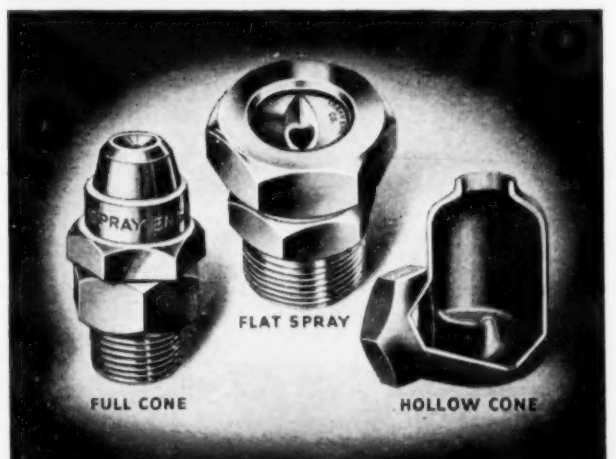
▲ For more details circle **NED-145 E5** on enclosed inquiry slip ▲

COST CUTTING EQUIPMENT

Send for catalog on Pressed Steel Equipment

FAB-WELD CORPORATION
SALMON & PICKWICK STS., PHILADELPHIA 34, PA.

▲ For more details circle **NED-146 E5** on enclosed inquiry slip ▲

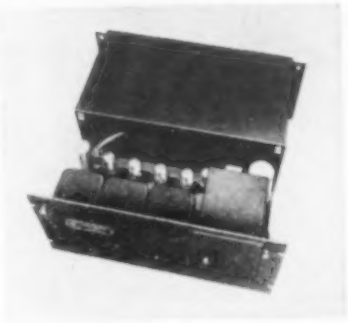


SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ For more details circle **NED-147 E5** on enclosed inquiry slip ▲

DIRECT CURRENT AMPLIFIER increases speed of dc measurements

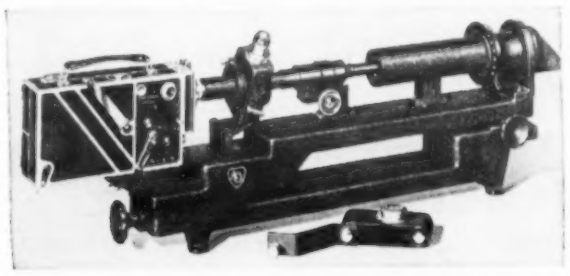


Speed and accuracy of practically all low-level direct current voltage measurements can be increased with model P direct current amplifier. Intended for use in power generation, steel production and high-temperature processing, this precise instrument is compatible with inputs from thermocouples, radiation pyrometers, thermal converters and strain gages. Applications involve temperature measurement and control, telemetering, automation and dc preamplification. Full scale response is better than 0.1-second and accuracy is $\pm\frac{1}{4}$ per cent of input range for 5 mv and up. Amplifier is available in multiple fixed and adjustable ranges, with fixed or adjustable zero suppression circuits. Made by **Hagan Corp.**, P. O. Box 1346, Pittsburgh 30, Pa.

▲ For more details circle **NED-148 E5** on enclosed inquiry slip ▲

HIGH TEMPERATURE MICROSCOPE allows visual examinations of specimens in the molten state

Practical means for both visual examination and photographic recording of specimens during their molten state in a microfurnace is provided by this



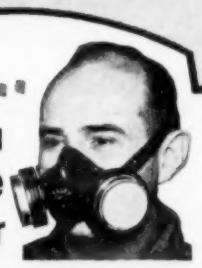
high temperature microscope. Instrument has proved useful in such representative studies as determining corrosion of different refractories by different types of glass; melting points of crystalline material; softening and vitrification behavior of amorphous and ceramic materials; and inversion point determination.

Image of furnace specimen is transmitted through relay lens with working distance of 8 in. and passes through objective attached to horizontally mounted microscope body. Rack and pinion focusing is provided, and graduated iris diaphragm varies contrast of specimen. Beam splitter in optical path allows simultaneous use of both camera and an eyepiece. Instrument measures 30 in. long, 12 in. high and $4\frac{1}{8}$ in. wide. Made by **American Optical Co.**, Instrument Div., Dept. NED, Sugar & Eggert Rds., Buffalo 15, N. Y.

▲ For more details circle **NED-149 E5** on enclosed inquiry slip ▲

CESCO RIGHT... before your Eyes!

NOW... a Triple Use Respirator



for Organic Vapors—Uses two 85cc absorbent cartridges. BM approval No. 2307. Catalog No. 99.
for Dust—Uses two treated wool-felt filter pads. BM approval No. 2167. Catalog No. 96.
for Paint Spraying—Uses auxiliary cellulose filters to prevent cartridge clogging. Catalog No. 99-X.

• Contoured, snug fitting, comfortable facepiece. Free-breathing valves. No tool required for changing filters. Economical to use. See your CESCO distributor.

Send TODAY for CESCO literature

CHICAGO EYE SHIELD COMPANY • 2322 Warren Boulevard, Chicago 12, Illinois

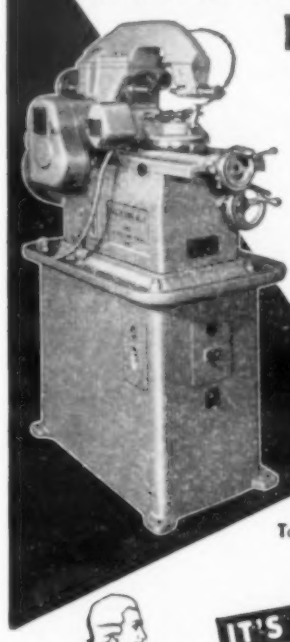
CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Dallas, Detroit, East Orange, Houston, Indianapolis, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City D. F., Milwaukee, Montreal, Peoria, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa, Wichita

▲ For more details circle **NED-150 E5** on enclosed inquiry slip ▲

5417

This GEAR HOBBER delivers EXTRA PRECISION



The Hamilton Precision Gear Hobber generates small, fine pitch gears to 6" O.D. of the gear blank. Alignment and trueness of all spindles held to less than .0002".

WHAT'S MORE

Independent selection of speed, feed, and indexing speeds machine set-up and provides a means for matching cutting speed and work feed to the material being machined.

WANT ALL THE FACTS?

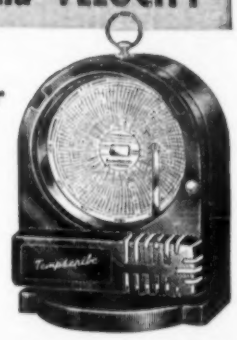
Write for Hamilton Bulletin No. 5417. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

▲ For more details circle **NED-151 E5** on enclosed inquiry slip ▲

Instruments for Measuring AIR TEMPERATURE and VELOCITY

TEMPSCRIBE Recording Thermometer



Available in 10 different ranges to cover −30°F to +160°F temperatures, and with spring-operated chart drives for any of the following chart rotations: 8 hours, 24 hours or 7 days.

This entirely self-contained, compact and reliable temperature recorder automatically writes a continuous record of temperature changes on a replaceable chart. Record shows at a glance maximum and minumum temperatures and the duration of temperatures above or below any given point; also shows the exact time of every temperature change and how rapidly it takes place. Recording pen and bi-metallic element are built in hinged, removable door which is also front of instrument. Thus, by merely changing doors it is easy to interchange temperature ranges. Instrument is 8" tall, $5\frac{1}{2}$" wide and $4\frac{1}{2}$" deep. Charts are $4\frac{1}{2}$ inches in diameter.

Write for Bulletin I-715

FLORITE Anemometer

In principle, this unique instrument operates as an anemometer but provides instantaneous, direct readings of air velocity without timing, calculations or reference to charts. Readings are obtained by holding the instrument in the air stream so that air blows against its circular face, causing rotation of a multi-blade rotor mounted in instrument housing. The circular scale surrounding the rotor instantly turns to correct air velocity reading under an index pointer on scale window. Furnished with detachable handle (not shown) and leather case.

Available in two styles: One with a scale of 0-1000 ft./min., and the other with a double scale of 0-3000 ft./min. and 0-35 miles per hour.

Write for Bulletin I-760

BACHARACH Industrial Instrument Co.
7301 PENN AVENUE • • PITTSBURGH 8, PA.

▲ For more details circle **NED-152 E5** on enclosed inquiry slip ▲

DO THIS If You Want to STOP LEAKS

. . Seal Out Dampness in Basement Walls!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. (Minimum quantity 6 gallons)

USED IN
- ELEVATOR PITS
- TUNNELS, DRAINS
- WATER TANKS
- RETAINING WALLS

MAIL COUPON FOR TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY • *Offices in Principal Cities*
3603-F Filbert St., Philadelphia 1, Pa.
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name ..... Title .....
Company .....
Address .....

▲ For more details circle **NED-153 E5** on enclosed inquiry slip ▲

DEGREASER!
engine shampoo

QT. SIZE CONCENTRATE MAKES 2 GALLONS

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off as easily as you rinse hands under water faucet.

Launders engines faster, more completely, and safer than steam cleaning (warm the engine). Self scouring action brings out factory new appearance . . . provides accurate visual inspection . . . Gunked engines run cooler.

Get Genuine Gunk in quart and larger sizes at better wholesale auto suppliers throughout the country . . . Flatly refuse imitations.

CLEANS MACHINERY TOO

The CURRAN CORPORATION, Lawrence, Mass.

▲ For more details circle NED-154 E5 on enclosed inquiry slip ▲

what is YOUR COMPOUND MELTING PROBLEM?

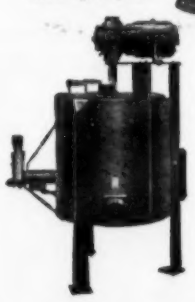
● During the past thirty-odd years, American Industry has frequently turned to Sta-Warm for their engineering suggestions in helping to *heat, melt, store, convey and dispense* a wide variety of compounds, waxes, pitch, tars, soft metals, adhesives and similar materials (including certain plastics.

New model wax pot. Variable thermostat. Pilot light. Steel Housing. Cast Aluminum liner.

● Fortunately, many of these problems we have been able to help to solve.

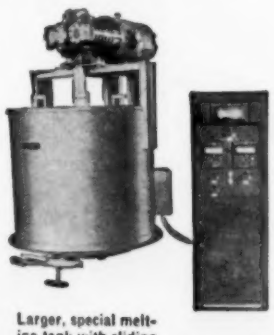
One of many styles of Sta-Warm compound melters and dispensers. There's one for your job.

● Thus, in this specialized field, Sta-Warm has developed experience which can be valuable to plant operators whose production lines include the use of heated compounds and similar materials.



50 gal. compound melter with power agitator.

● Sta-Warm offers a wide variety of standard and specially designed models of heating tanks, kettles and pots. Included are the necessary accessories, pumps, agitators, etc. and control panels to make a complete package.



Larger, special melting tank with sliding gate valve, motor driven agitator and control panel, for special mounting.

● If you want to upgrade the efficiency of your compound melting operation, why not inquire for product catalogs today?

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle NED-155 E5 on enclosed inquiry slip ▲

STAINLESS HANDLING BASKETS
stack or nest for convenience

Patterned after standard Nestier materials handling boxes, these perforated stainless steel baskets feature rapid draining and easy cleaning. Five sizes ranging from 12 to 36 in. long can be supplied in various types of stainless steel as well as in aluminum with a variety of perforation sizes. Design of basket handles permits stacking when filled or nesting when empty for compact storage and handling. Made by **Chas. Wm. Doepke Mfg. Co.,** 8884 Blue Ash Rd., Rossmoyne, O.

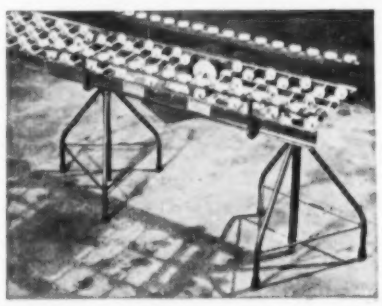
▲ For more details circle NED-156 E5 on enclosed inquiry slip ▲

WIDE SEALED BALL BEARINGS
for loads to 2610 lb at 3600 rpm

Made in standard bores and outside diameters, W-KLL series Mechani-Seal ball bearings have widths equivalent to those of corresponding size double-row bearings. They are designed especially for applications where frictionless sealing and large grease capacity are important. Seven sizes cover bore diameters from 0.9843 to 2.1654 in. with corresponding rated radial load capacities of 514 to 2610 lb at 3600 rpm. Bearings are lubricated for life with factory-filtered grease. Made by **Fafnir Bearing Co.,** Dept. B, New Britain, Conn.

▲ For more details circle NED-157 E5 on enclosed inquiry slip ▲

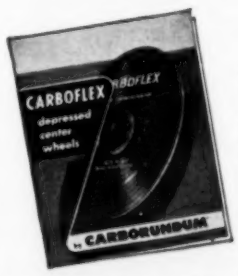
CARTON GLUING CONVEYOR
applies two glue strips on bottom



Shipping cartons can be glued into solid loads that withstand the shocks of transit by means of this Speedglu conveyor. Device is essentially a special 4-ft section of a 12, 15 or 24-in. gravity wheel conveyor, designed for use with almost any Speedways materials handling unit. It automatically applies two thin strips of special glue to bottoms of shipping cases or containers as they come off the conveyor line. Made by **Speedways Conveyors, Inc.,** 181 Speedways Bldg., Buffalo 13, N. Y.

▲ For more details circle NED-158 E5 on enclosed inquiry slip ▲

FREE FOLDER...
describes new depressed center wheels



A four-page folder released by THE CARBORUNDUM COMPANY gives complete information about its line of CARBOFLEX Depressed Center Wheels. Sizes, thicknesses and recommended operating speeds are presented in handy chart form. Typical applications of the wheels in foundries, autobody shops, shipyards, welding shops and similar operations are listed in detail. These include undercutting and reducing heavy welds, roughing off fins and sharp edges, notching and cutting off gates and risers, removing surface defects, and general purpose roughing, slotting and cutting off.

UNUSUAL STRENGTH and resistance to cracking is claimed for CARBOFLEX wheels because of a new and more effective combination of tougher abrasive grain and a stronger reinforced bond. Another outstanding feature: back of the wheel, as well as the face, is knurled. This permits cutting with either side plus the edge, without initial dressing. Tests show CARBOFLEX Depressed Center Wheels offer more production per wheel, at less abrasive cost—plus maximum operator safety.

GET YOUR FREE FOLDER on CARBOFLEX Depressed Center Wheels. Use the inquiry card provided by this publication, or if you prefer, write **The Carborundum Company,** Dept. NED 81-511, Niagara Falls, New York.

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York

81-511

▲ For more details circle NED-159 E5 on enclosed inquiry slip ▲

For checking the strength of load binders . . . or weighing giant turbines—MAKE SURE WITH

DILLON DYNAMOMETERS

MEASURE TENSILE, COMPREHENSIVE, OR TORQUE FORCES

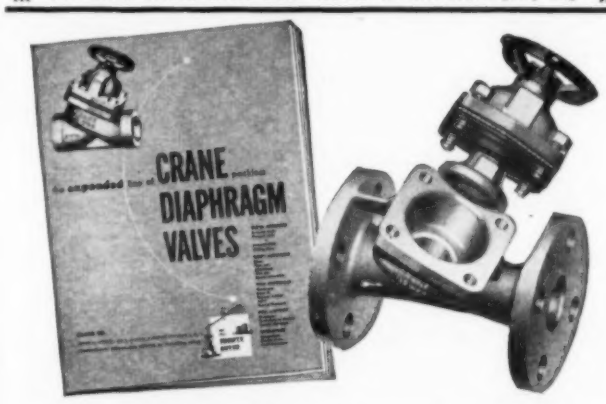
MORE THAN 100 DIFFERENT USES — from simple weighing to intricate testing, DILLON DYNAMOMETERS do any measuring job accurately, dependably, consistently. Rugged and compact, these precision instruments are easy to rig and to read . . . are built to take years of hard, daily use! Reasonably priced!

13 DIFFERENT CAPACITIES — from 0-500 lbs. up to 0-100,000 lbs. . . . each complete with max. hand, shackles, safety glass crystal.

WRITE TODAY FOR ILLUSTRATED LITERATURE

W. C. DILLON & CO., INC.
14620NE Keswick Street, Van Nuys, California
(Suburb of Los Angeles)

▲ For more details circle NED-160 E5 on enclosed inquiry slip ▲



Leaky stuffing boxes your headache?
Send for 24-page booklet on Crane Packless Diaphragm Valves

When stuffing box leakage is a serious problem, why not consider Crane Packless Diaphragm Valves?

In these valves line fluid doesn't enter the bonnet—it's sealed with a long-life diaphragm that eliminates packing. Separate disc gives tight seating—saves wear on the diaphragm—permits closure on fluid should diaphragm fail.

These Crane valves are used on water, air, oil, gas and on many corrosive, abrasive and hard-to-hold fluids. Choose from a wide variety of body and trim materials; also body linings. Send for catalog giving valuable application data.

CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

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DELAVAN INDUSTRIAL
Spray Nozzles

Choose from the complete selection of precision Delavan Industrial Spray Nozzles. Literally thousands of types and capacities designed for your application.

FREE
REFERENCE CATALOG

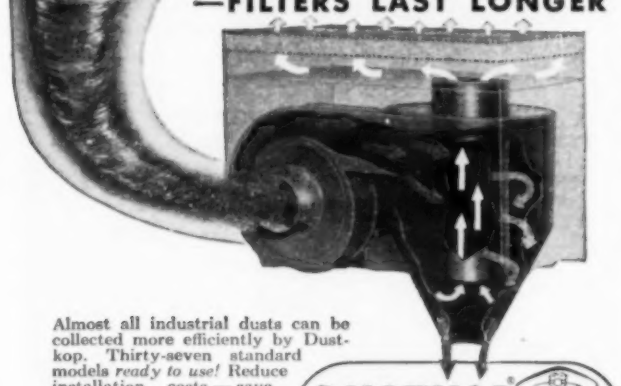
Catalog 32 will help you select the right industrial nozzle for your specific requirements. Details consist of applications, features, capacities, spray angles and physical dimensions. Fully illustrated. Write:

DELAVAN
Manufacturing Co.
WEST DES MOINES, IOWA

▲ For more details circle NED-162 E5 on enclosed inquiry slip ▲

CYCLONE SEPARATION

FOR MORE EFFICIENT DUST COLLECTION —FILTERS LAST LONGER



Almost all industrial dusts can be collected more efficiently by Dustkop. Thirty-seven standard models *ready to use!* Reduce installation costs — save space. Write for descriptive literature.

DUSTKOP STOPS DUST

ALSO A COMPLETE LINE OF MIST COLLECTORS

AGET MANUFACTURING COMPANY
1396 EAST CHURCH ST., ADRIAN, MICH.

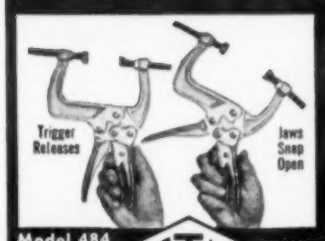
For more details circle NED-163 E5 on enclosed inquiry slip

NOW, ANOTHER

DE-STA-CO FIRST...

3 NEW PORTABLE CLAMPS WITH

TRIGGER-RELEASE!



Model 484

DE-STA-CO

Model 482

Model 486

Instant easy action enables operator to release clamp *with one hand!*

TRIGGER-RELEASE—Finger pressure on Trigger instantly throws jaws wide open, ready for next clamping action.

GREATER CLAMPING PRESSURES—Up to 1200 pounds may be exerted. Normal operating pressures of 300 to 500 pounds are easily obtained.

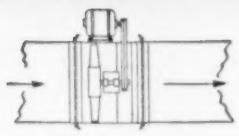
RUGGED CONSTRUCTION—60% heavier heat-treated forged components. Hardened bushings locked with spun rivet.

Get all details! Write for DE-STA-CO Bulletin 482-4-6!

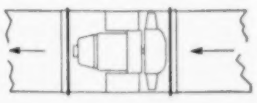
DE-STA-CO DETROIT STAMPING COMPANY
World's FIRST Line of TOGGLE CLAMPS
360 Midland Avenue • Detroit 3, Michigan

For more details circle NED-164 E5 on enclosed inquiry slip

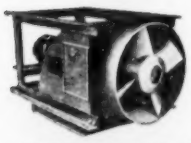
Large Volumes of Air-- with Low Power Consumption

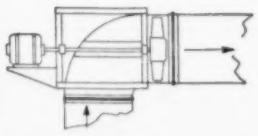


WINGFOIL Straight-Line Duct Fan



WINGFOIL Vaneaxial Duct Fan





WINGFOIL Elbow Type Duct Fan

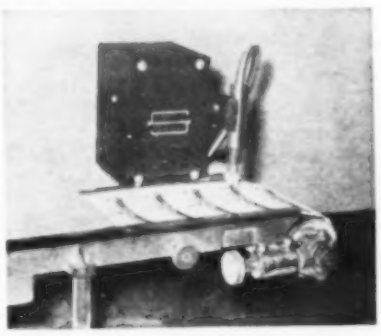
WINGFOIL DUCT FANS are your best bet, because of their strong, light-weight, rugged design, and the highly-efficient Wingfoil axial flow fan, which delivers high air volumes against static pressures with remarkably low power consumption.

The three types of duct fan, shown above, come in a wide variety of sizes and capacities. They are designed to handle hot or cold, dust-laden or corrosive air or gases and for exhausting or supplying air. *Write for Bulletin.*

L. J. Wing Mfg. Co. 165 Vreeland Mills Rd., Linden, N.J.

For more details circle NED-165 E5 on enclosed inquiry slip

PHOTOELECTRIC UNITS
miniature count and control units offered in two circuit types

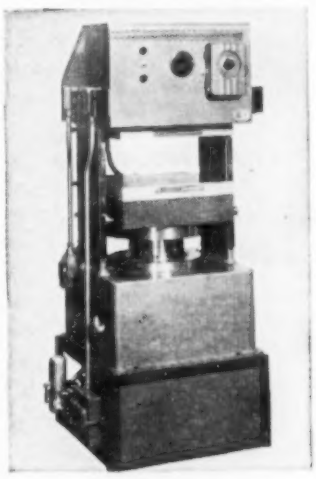


Miniature photoelectric units are available for counting and controlling applications in packaging, printing and general production. Size of phototube unit and light unit is 1½ x 1 11/16 x 11/16 in. Units can be assembled to ¼-in. pipe to form fixed assemblies, with the pipe carrying the electrical circuit wire.

Electric Eye units incorporate a trigger circuit which is tripped at a definite calibration or total cut-off of light, or a measuring circuit which gives a current reading or operates signals at predetermined points of a measured range. Trigger circuit signal operates an alarm, relay, counter or any device necessary to maintain production quality control. In certain cases reflection from a hot object or marked part can actuate controls. Probe type Reflextrol can be used to monitor registration or other reflected edge of material. Made by **Ess Instrument Co.**, Dept. SS, 96 S. Washington Ave., Bergenfield, N. J.

For more details circle NED-166 E5 on enclosed inquiry slip

H-TYPE HYDRAULIC PRESS
has electrically-heated platens which are controlled up to 600° F



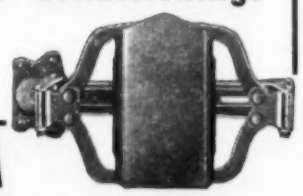
Added to line of hydraulic presses is this 70-ton automatic type H press which has 18 x 18-in. electrically - heated, water-cooled platens that can be controlled to 600° F. Platens have cast-in cooling coils and 230-v, 4000-w Calrod elements controlled by Fenwal Thermoswitches and Allen-Bradley relays. Electric cycle timer opens press at preselected intervals and resets for the next cycle. The 8-in. opening has removable adapter for obtaining 12-in. single daylight opening.

Pushbuttons control high and low pressure pumps which operate the 6¾-in. diameter hydraulic ram. Stroke is 8 in. with adjustable down stroke trip. Machine weighs 2600 lb, is 72 in. high and measures 26 x 26 in. at base. Units can be modified to suit requirements. Made by **Pasadena Hydraulics, Inc.**, 273 N. Hill Ave., Pasadena 4, Calif.

For more details circle NED-167 E5 on enclosed inquiry slip

Don't Waste Air Conditioning!

Close Doors Fast Without Slamming



KANT-SLAM

Hydraulic Door Check

CLOSES Large or small doors, screen doors and gates—easily, gently, smoothly

STOPS Loss of cooled air . . . slamming . . . banging . . . broken door glass . . . insects . . . drafts

$9.95

ATTRACTIVE DARK BRONZE METALLIC LACQUER FINISH—HAMMERED BRONZE EFFECT

Keep your offices and buildings cool all summer! KANT-SLAM closes doors quickly, gently, with human hand efficiency . . . reduces air conditioning loss. Hydraulic action—NOT air check—piston works in oil. 5 years trouble-free service guaranteed. Price about ½ other hydraulic controls. Works along top, middle, bottom of either right or left hand doors. Completely self-contained—door and hinges 100% free of strain or pressure. Holds door open when past 90 degrees. Only 1 size Check needed—3 sizes easily detachable springs available for various size doors. Simple screw adjustment for closing speed.

Order on 30 Days FREE TRIAL at $9.95 Delivered—or Write for Complete Details

Used by Hundreds of Nationally-Known Firms

Oak Ridge Atomic Energy Plant, University of North Carolina, Great A. & P. Tea Co., Bethlehem Steel Co., General Electric Co., Rutgers University, Northrup Aircraft, Fuller Brush Co., Carnation Co., Shell Oil Co., Kraft Foods

KANT-SLAM DOOR CHECK CO.
1075 W. Spring St., Bloomfield, Indiana

For more details circle NED-168 E5 on enclosed inquiry slip

NOW—A FREE BULLETIN 5423

Tells HOW SPECIAL PORTELVATOR®

THE HANDY HAMILTON PORTABLE ELEVATING TABLE

● is used throughout industry to do the heavy lifting, positioning, and transporting jobs which have harassed production executives since the word "production" assumed its present meaning.

Find out how others have solved problems parallel to yours.

WRITE FOR FREE BULLETIN 5423

ADDRESS THE HAMILTON TOOL COMPANY
901 HANOVER STREET, HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-169 E5 on enclosed inquiry slip

DEKA BORE repeats to .0001" in 30 seconds

DEKA-BORE Model A-2

DEKA-BORE (and only DEKA-BORE) can be adjusted in fractions of 1/10,000" on the full diameter as easily as reading 1/16" on a steel rule. NOT A VERNIER OR SCROLL ADJUSTMENT. Can be calibrated in increments of .00005 on radii or .0001 on diameter as easily as picking up .002 on a conventional micrometer dial.

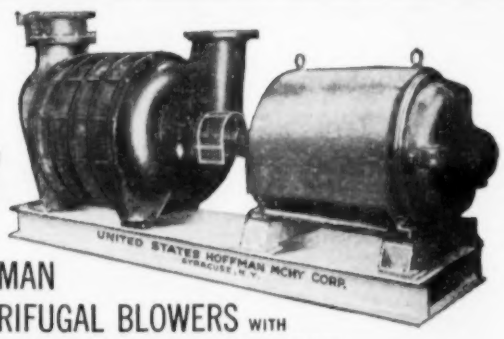
100% GUARANTEED!

write for free demonstration or literature!

PRECISION TOOL & MFG. COMPANY OF ILL.
1305 SOUTH LARAMIE, CICERO 50, ILLINOIS NED-5

For more details circle NED-170 E5 on enclosed inquiry slip

now



HOFFMAN CENTRIFUGAL BLOWERS WITH QUICK DELIVERY AND LOW COST

New assembly procedure on the Hoffman Multi-stage Centrifugal Blowers—throughout the entire volume range of 2000 to 9000 CFM—now assures delivery in a fraction of the time usually required in building such "custom" equipment.

Interchangeable impellers are assembled into standard frame units to produce the blower-exhauster of the desired capacity. All blowers turn up pressure as high as 9 lbs./sq. inch, or vacuum up to 12 inches mercury.

This new "standardized production" procedure not only cuts delivery time on the blower, but slashes cost from ½ to ⅔ of the former figure for custom-built equipment. These blowers-exhausters work on the same unique principles of no gears, pistons, rollers, valves, or other wearing parts . . . having a one-piece impeller assembly as the sole moving part. These units operate non-stop over long periods, with no adjusting, almost no maintenance required. *Write for full information.*

AIR APPLIANCE DIVISION

U.S. HOFFMAN MACHINERY CORPORATION
Dept. NED, 105 FOURTH AVENUE • NEW YORK 3, N. Y.

For more details circle NED-171 E5 on enclosed inquiry slip

Chicago RIVET "912"
AUTOMATIC RIVET SETTER
CUTS COSTS 3 WAYS

1 FASTENS FASTER . . . Only the speed of the operator limits the 912's riveting speed. Completely automatic. A push on the foot pedal automatically feeds, inserts and clinches the rivet.

2 DOES WORK OF SEVERAL MACHINES Quick change rotary hopper and raceway makes the 912 adjustable in 5 to 10 minutes to set different size rivets. Adjustable anvil height and 12-inch throat provide further versatility.

3 SAVES ON MAINTENANCE . . . The 912 is massively built to stand the shocks of constant use and is designed for quick, easy servicing and parts replacement.

If your assembly calls for 3/16" steel tubular rivets or smaller, of 15/16" lengths or less, ask us to show you how the 912 can cut your fastening costs. Send a sample of your problem assembly (or blueprint) for a free fastening analysis.

FREE CATALOG *contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.*

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

For more details circle NED-173 E5 on enclosed inquiry slip

HOW **XEROGRAPHY**
(ze-rog-ra-fee)
cuts duplicating costs 33⅓% for Gerber Products Co.

America's Best Known Baby

Babies are big business at Gerber Products Co., Fremont, Michigan. Of the nearly 4,000,000 babies born last year in the United States, it is estimated that about 40% of them will be fed Gerber's Baby Foods.

It takes mountains of paperwork to keep Gerber's vast scope of operations functioning smoothly. A wide variety of forms including job cards, order receipts, expense account forms, machine drawings, production reports, traffic invoices, letters, bulletins, etc., are required.

The task of duplicating these forms in quantity, has been simplified and speeded, since Gerber installed XeroX® copying equipment to prepare paper masters in 3 minutes by xerography.

XEROGRAPHY SPEEDS PAPERWORK

Anything written, typed, drawn or printed can be reproduced with photographic accuracy in about 3 minutes by xerography onto an offset paper master. These masters are used to run off multiple copies on an offset duplicator. Copies can be made from one or both sides of original material, by xerography, in enlarged, reduced or same size.

For use in diazo type machines, translucent intermediates can be made from an original in the same speedy way.

It is now possible with xerography to make up to 8 copies from 1 xerographic image, including an offset paper master or translucent intermediate.

WRITE *for proof of performance folders showing how Gerber and companies of all kinds, large and small, are cutting duplicating costs and speeding paperwork with xerography.*

THE HALOID COMPANY
55-58X HALOID STREET, ROCHESTER 3, NEW YORK
BRANCH OFFICES IN PRINCIPAL U.S. CITIES AND TORONTO

XEROGRAPHY
THE FASTEST, CHEAPEST, MOST VERSATILE WAY TO MAKE MASTERS FOR DUPLICATING.

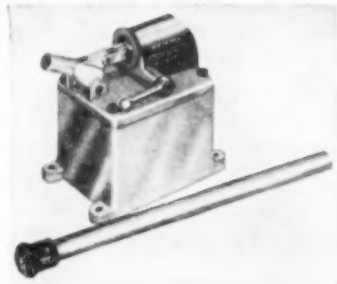
For more details circle NED-174 E5 on enclosed inquiry slip

MODEL DIAPHRAGM SEAL
transparent to show operation

The basic operating principles and performance of a typical Bellofram diaphragm seal are clearly visible to designers and manufacturers in this working model actuator. Made of transparent plastic, seal has friction-free rolling action. Model 10-40 for pressure up to 40 psi and model 10-100 for pressure to 100 psi are offered at cost, $2.50 and $4.50, respectively. Both incorporate a class II flange type seal. Offered by **Bellofram Corp.,** Dept. A, 144 Moody St., Waltham 54, Mass.

For more details circle NED-175 E5 on enclosed inquiry slip

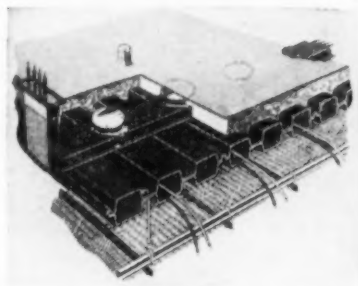
HYDRAULIC HAND PUMP
pressures up to 1500 psi



Model H1601 double-action hydraulic hand pump has a capacity of 1.5 cu in. per cycle with operating pressures up to 1500 psi. It features plated piston, positive check valve and quick release valve. Made of aluminum alloy, single lever pump provides accurate lowering control. Handle holder reverses for horizontal or vertical pumping action. The 9-lb, 9 x 5½ x 7-in. unit has a 150 cu in. oil capacity and ¼-in. NPT portings. Made by **Wisconsin Hydraulics, Inc.,** 3166 N. 30th St., Milwaukee 16, Wis.

For more details circle NED-176 E5 on enclosed inquiry slip

CELLULAR SUB-FLOORING
permits electric outlet flexibility



Easily handled, quickly erected sections of cellular steel sub-flooring permit unlimited electrical outlet flexibility in building construction and remodeling. High strength, lightweight, cellular sub-flooring permits wiring of all types to be run throughout the floor, with electrical outlets placed at any location, at time of installation or in the future. Made by **American Steel Band Co.,** P. O. Box 565-N, Pittsburgh 30, Pa.

For more details circle NED-177 E5 on enclosed inquiry slip

SHEAR Magic!

YOUR TWO toughest problems—rust and easy adjustment—vanish when you equip your workers with these new Clauss industrial shears. Chrome plating over nickle fully protects the vulnerable *insides* of blades. Stainless steel screw can't rust out. Screw is set in locking nut that loosens easily for adjustment, tightens to hold setting permanently.

These great new features mean longer life for every pair of shears you buy, fewer rejects because of rust on fabrics, valuable time saved by easy, on-the-job adjustment.

No magic about how to put them to work for you—just circle the inquiry slip!

Clauss
FINE CUTLERY SINCE 1877

HOT HAMMER-FORGED TOOLS FOR INDUSTRY

CLAUSS CUTLERY COMPANY, FREMONT, OHIO

For more details circle NED-178 E5 on enclosed inquiry slip

Why buy random length tubing when Bishop can save you money on CUT LENGTHS? FABRICATED TUBULAR PARTS?

Bishop, the only redraw mill that specializes in fabricating tubular parts, can offer economical service because "under one roof" re-drawing and manufacturing facilities mean savings in time, transportation and handling . . . and eliminates spoilage or waste.

You can be sure of Bishop quality because Bishop pioneered small diameter stainless steel tubing and have been precision craftsmen since 1842.

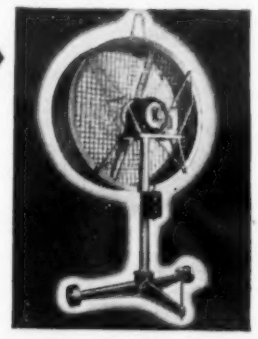
Try Bishop on your next order, and save. Catalog on request.

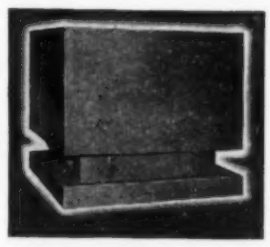
J. BISHOP & CO. Platinum Works
Stainless Steel Division • Malvern, Pa.

For more details circle NED-179 E5 on enclosed inquiry slip

Don't Let SUMMER Catch You Unprepared

Use Hartzell Man Coolers To Blast Away "Hot Spots"





Use Hartzell Roof Ventilators To Exhaust Heat and Fumes

Let your nearby Hartzell field engineer help you pick the right equipment to keep your production up during even the hottest weather. Call him today.

HARTZELL *propeller fan co.*
Div. of Castle Hills Corp
Dept. G. PIQUA, OHIO

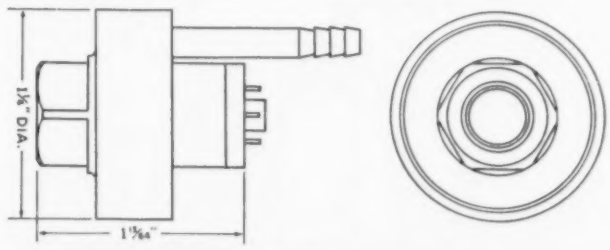
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-180 E5 on enclosed inquiry slip

NOW...new accuracy in low-pressure measurement

Accurate enough for precision laboratory measurements, yet sufficiently rugged for in-flight aircraft testing and industrial control use...CEC's new 4-315 *low-pressure* differential pickup. Lightweight (only 60gm) and among the smallest commercial low-pressure pickups available, it is the latest addition to the widely used 4-300 series of resistance-type pressure pickups.

Pressure ranges ±1, ±2, and ±3 psid
Sensitivity ±10 mv f.s.
Excitation 5 v d-c or a-c rms, 0-20 kc
Input/Output Impedance 350 ohms
Linearity 1% f.s. maximum deviation
Hysteresis less than 1% of f.s.
Acceleration Response less than 0.13% of full scale per g
Construction 416 stainless steel
Pressure Connection ⅛ npt Internal Thread
A **complete** calibration certificate sent with every unit.



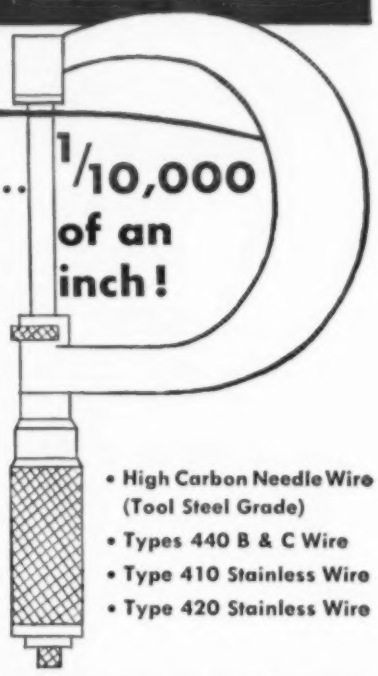
Send for pickup Bulletin CEC-1556-X8.

Consolidated Engineering CORPORATION
300 North Sierra Madre Villa, Pasadena 15, California

For more details circle NED-181 E5 on enclosed inquiry slip

WANT FINE WIRE ACCURACY FOR SMALL PRECISION PARTS?

WEBB dies are accurate to... 1/10,000 of an inch!



Let Webb put an end to tolerance, size and finish worries on your fine wire needs. Diligent maintenance of Webb dies assures you of superior product performance for your pins, shafts, pivot staffs, drills, points, etc. Enjoy the benefits of using fine wire made from *specialty* steel.

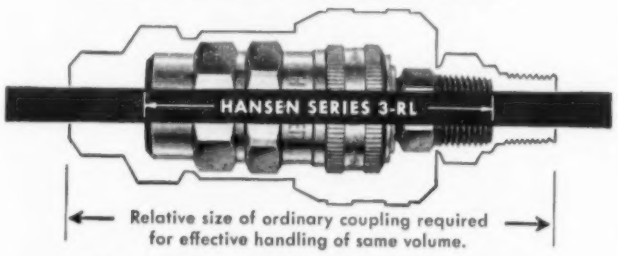
- High Carbon Needle Wire (Tool Steel Grade)
- Types 440 B & C Wire
- Type 410 Stainless Wire
- Type 420 Stainless Wire

WRITE TODAY for free samples *MAKE YOUR OWN TESTS!*

The Carpenter Steel Company | WEBB WIRE DIVISION New Brunswick, N.J.

For more details circle NED-182 E5 on enclosed inquiry slip

THE NEW HANSEN SERIES 3-RL QUICK-CONNECTIVE RING-LOCK COUPLING



Effectively handles far more volume than any coupling of equal dimensions

● Handles any job in your shop using ¾" to ⅛" connections—from the air line to the air tool. No longer essential to have various size couplings in your hook-up. The Hansen Series 3-RL, with completely interchangeable Sockets and Plugs does it all—simplifies keeping stock of parts in balance—holds inventories to a minimum. Quickly and positively connected merely by pushing Plug into Socket. To disconnect, just turn the sleeve. Locking ring in Socket enters groove in Plug, provides practically 360° metal to metal contact, reduces wear, and insures tight fit. Equipped with automatic sleeve lock.

Write for Descriptive Literature

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-183 E5 on enclosed inquiry slip

an ACCO product

Acco Announces the WRIGHT Electric Roller Chain Hoist

● This dependable hoist—competitively priced—rounds out the famous WRIGHT line of motor-driven and hand-operated equipment which includes hoists, ratchet lever hoists, cranes, end trucks and drive units for cranes, and trolleys.

This is a hoist that has been proved in service. A hoist with fewer parts and amazingly low maintenance. A hoist of rugged simplicity that lasts longer. The WRIGHT Electric Roller Chain Hoist is built to ACCO standards of quality for Better Value to the user.

It has the fewest number of wearing parts. It has a self-locking, double-worm gear which acts as its own load brake. And it has many other important features. Available through WRIGHT HOIST distributors.

Write our York, Pa., office for Bulletin DH-504 for the full story

ACCO Wright Hoist Division AMERICAN CHAIN & CABLE

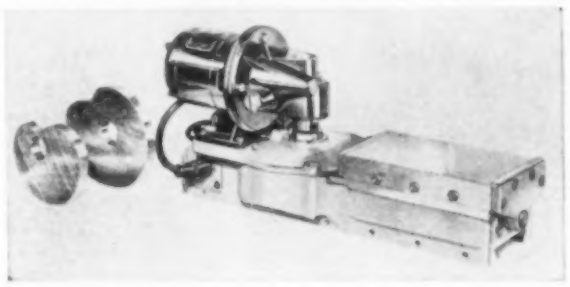
for Better Values

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-184 E5 on enclosed inquiry slip

POWER FEED UNIT controls metalworking operations, builds into any production machine

Cam-controlled automatic feed cycles for such precision operations as drilling, tapping, boring, reaming, sawing, milling and broaching are provided by a



cycling power feed unit. Self-contained mechanical unit consists of slide assembly, feed mechanism, cam drive motor and housing. It can be built into any special production machine. Any desired tooling setup may be mounted on the slide, with cams for controlling the feed cycle made by the user or supplied by the manufacturer.

Unit measures 17 x 6 x 8⅛ in., can be mounted horizontally, vertically or at an angle and has a 4 x 6-in. working surface. Stroke is 2 in. Gearmotor rotates the cam which regulates feed cycle of slide, delivering a torque of 52 lb-in. Standard cycle times of 4, 6, 8, 10, 12 and 16 seconds per revolution are available. Made by **Russell T. Gilman, Inc.,** 1243 Milton Ave., Janesville, Wis.

For more details circle NED-185 E5 on enclosed inquiry slip

PROCESS OR DATA INDICATOR operates from remote pickup

Quick and accurate indication of pressure, temperature, force or displacement is provided by the type DK indicator by means of pickups using the output of 60-cycle linear variable differential transformers. A 7-in. diameter dial on the indicator face has 200 divisions and is calibrated from 0 to 100 over 300 degrees of rotation. Other dials with special calibrations can be provided. The portable high speed, self-contained indicator contains a two-position rotary switch which varies the high range sensitivity. Accessory equipment includes adjustable high and low limit switches, rheostat for slide wire control, "analog to digital" converter for use with business machine type data handling equipment and maximum load pointer. Made by **Schaevitz Engineering,** P. O. Box 505, Camden 1, N. J.

For more details circle NED-186 E5 on enclosed inquiry slip

FREE!

Proven ways to cut maintenance and replacement costs...in every issue of the **"NEOPRENE NOTEBOOK"**

Laboratory reports and case histories on saving with neoprene, Du Pont's chemical rubber. Mail reader service card for your subscription.

DU PONT REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

NEOPRENE

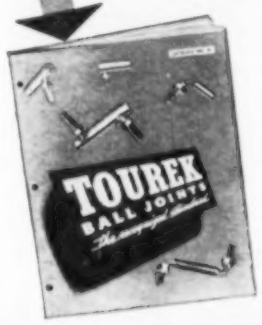
THE RUBBER MADE BY DU PONT SINCE 1932

For more details circle NED-187 E5 on enclosed inquiry slip

Tourek

EXTREME UNIFORM ACCURACY IN SCREW MACHINE PRODUCTS

SEND FOR This Free 16-page Ball Joint Guide!



This attractively printed 16-page TOUREK Ball Joint Guide-Catalog will be mailed to you without cost or obligation. It contains pictures, diagrams, cross sections, tables, ideas, suggestions and other technical data especially designed to help YOU specify exactly the right Ball Joints for your specific applications. Send for your copy today! ★ If you need "standard" or special Ball Joints, or the fast, economical production of *any* type of screw machine product, you'll profit by turning to TOUREK.

J. J. TOUREK MFG. CO.

ESTABLISHED 1920

1901 SOUTH KILBOURN AVENUE, CHICAGO 23, ILLINOIS

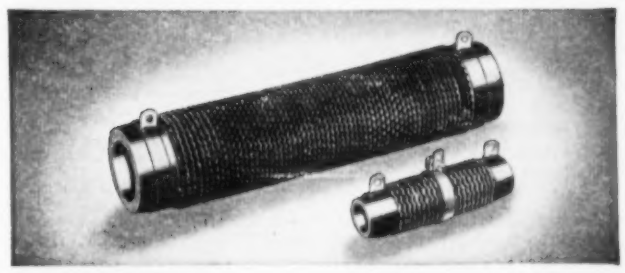
.. UP TO 2-5/8" DIAMETER SINGLE AND MULTIPLE SPINDLE MACHINES ..
THREADING • TAPPING • MILLING • DRILLING • GRINDING • POLISHING • PLATING • HEAT TREATING • SILVER SOLDERING

WORLD'S LARGEST MANUFACTURER OF "STANDARD" BALL JOINTS

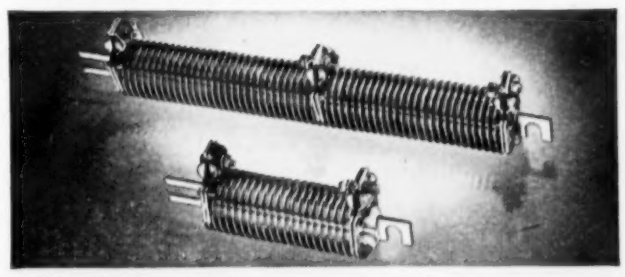
For more details circle NED-188 E5 on enclosed inquiry slip

OHMITE®

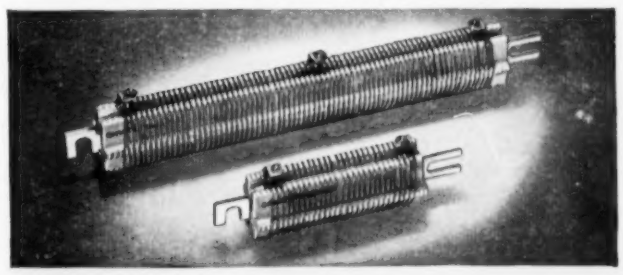
***Power Type* RESISTORS for high-current LOW-RESISTANCE APPLICATIONS**



CORRIB® vitreous-enameled type
Fixed, tapped, and adjustable types in 22 sizes, 90 to 1500 watts. Resistances from .04 to 70 ohms.



POWR-RIB edgewound-ribbon type
Has ceramic core, sectionalized to resist shock. Four sizes. Values .043 to 1.6 ohms; 24 to 95 amps.



POWR-RIB round-wire type
Has sectionalized core similar to ribbon type. Four sizes. Values from .69 to 25 ohms; 5.1 to 18.4 amps.

Write for Bulletin 144

OHMITE MANUFACTURING COMPANY
3620 Howard St., Skokie, Ill. (Suburb of Chicago)

OHMITE®
RHEOSTATS • RESISTORS
RELAYS • TAP SWITCHES

For more details circle NED-189 E5 on enclosed inquiry slip

ANOTHER **FLASH-O-LENS** AT WORK
INSPECTING FILAMENT GUIDES AT
Celanese Corporation

Lighting and *magnifying* the inspection area, FLASH-O-LENS speeds and simplifies the checking of filament guides on the coning machines at the Narrows, Va., plant of Celanese Corporation of America. That's just one of the many, many jobs on which FLASH-O-LENS is being used because its built-in bulb gives bright illumination — and its accurately ground lenses assure sharply detailed enlargement.

Battery and plug-in models available — priced from $10.95. Write for literature and prices.

E. W. PIKE & CO., Inc.
492 NORTH AVENUE ELIZABETH 3, N. J.

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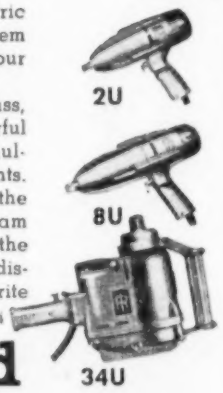
HIGHER PRODUCTION at LOWER COST

ELECTRIC IMPACTOOLS
Reduce nut running time

Here's the heavy-duty line of Electric Impactools that out-performs, out-lasts them all. There's a size just right for all your production and maintenance jobs.

Each is a leader in its capacity class, including the new Size 5U, the most powerful of all ½" drive electric tools. Becomes a multi-purpose tool with standard attachments.

For top efficiency on the smallest to the toughest jobs in your plant, get the I-R team of dependable Electric Impactools . . . the 2U, 5U, 8U and 34U. Call your I-R distributor for a demonstration today, or write for full information. 18-214



Ingersoll-Rand
11 Broadway, New York 4, N. Y.
Originators of Impactools—AIR & ELECTRIC

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EVERY TYPE to fit every problem

INCO-CAST Fittings
CORROSION-RESISTING
Monel,® Nickel and Inconel®

- Resist most corrosives
- Withstand high and sub-zero temperatures
- Strong, tough, sound
- Protect product purity
- Pressure-tested
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WRITE for handy price list catalog. Contains full information, and will be sent you promptly. No obligation.

INCO The International Nickel Company, Inc.
67 Wall Street, New York 5, N. Y.

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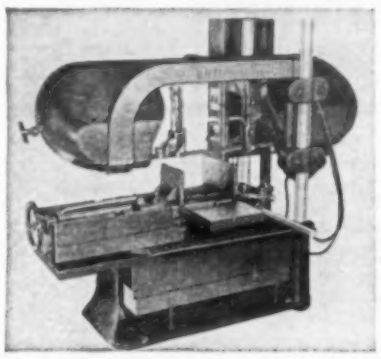
BAND SAW
hydraulically operated

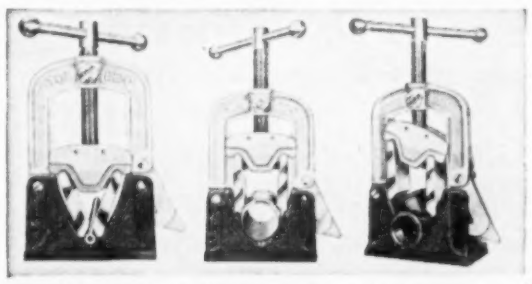


Electrical system incorporated in the model 1200 heavy duty hydraulically operated metal-cutting band saw provides overload and low voltage protection and 110 v at controls. Pushbuttons and other controls are at convenient operating height. Saw has a capacity of 12¾ in. for rounds, 12 x 16 in. and 11 x 18 in. for rectangular shapes. The 13½ ft x 1 in. x 0.035-in. blade, driven by a 1-hp motor, can be operated at selective speeds of 60, 115, 200 or 300 fpm. Other features are wide range of uniform blade feeding pressures, automatic cutting cycle, chip flushing unit, adjustable blade guides, foolproof blade tensioning, adjustable stops for die block depth cutting and rigid stock stop. Made by **Wells Mfg. Corp.**, 1313 Harding St., Three Rivers, Mich.

▲ For more details circle NED-193 E5 on enclosed inquiry slip ▲

PIPE VISE
jaws grip without crushing

Heat treated jaws that grip with rocking wedge action are used in the No. 1 pipe vise for heavy duty use. Benefits of this action include firm grip without crushing and ability to grip either very small or large pipe (⅛ to 2½ in. OD), as well as irregular shapes such as valves, tees and ells. Jaw action will not mark pipe. Made by **Toledo Pipe Threading Machine Co.**, Dept. NED, Toledo, O.



▲ For more details circle NED-194 E5 on enclosed inquiry slip ▲

Thermocouples & Pyrometers

Bristol Co.—56-page illustrated bulletin P1238 is a buyer's guide and user's manual on thermocouples and pyrometer accessories. Extensive engineering data aids in the selection and installation of the proper types of thermocouples, wells, head assemblies and other pyrometer accessories as well as recommended thermocouples for specific installations in the chemical, metalworking iron and steel, ceramic, petroleum, food and glass industries.

▲ For more details circle NED-195 E5 on enclosed inquiry slip ▲

SAVE 2 WAYS ON PARTS CLEANING

Kleerflo SUPER CLEANMASTER

1. low first cost 2. operates for less!

Cleans *automatically*—saves time, labor. Air agitation produces scrubbing action eliminating manual cleaning. Patented Pump continuously filters compound. Super-power JET AIR GUN provides faster parts drying. Cleans all types of metal parts. Ideal for production or maintenance.

WRITE TODAY FOR DESCRIPTIVE BULLETIN

The Kleer-Flo Company
252 West 57th St., New York 19

▲ For more details circle NED-196 E5 on enclosed inquiry slip ▲

SAVE TIME APPLYING LIQUIDS —

Put touch-up enamel, sealing dope, layout blue, red lead and similar liquids or pastes in easy-to-use, leakproof Ellisco Brush Top Cans. THEY SAVE TIME because brush fastened to can makes application easy. THEY PREVENT WASTE because brush size is ideal for applying a minimum amount of liquid and "brush top" screws right back on can to keep from drying out. THEY INCREASE EFFICIENCY and Maintenance and Service men like the convenience of these cans.

Two styles are available: D Style with high-grade brushes soldered to caps and containing either a ring handle or detachable wood handle; HO Style with smaller acid swab type brushes riveted to screw caps. Size range: ⅛ pint to 1 quart. All sizes available from stock in any quantity.

Write—wire—phone for information and prices.

Ellisco REG. U. S. PAT. OFF.
GEO. D. ELLIS & SONS, INC.
American & Luzerne Sts.
Philadelphia 40, Pa.
BAldwin 3-3405

▲ For more details circle NED-197 E5 on enclosed inquiry slip ▲

Many BRUNT FAULTFINDERS Protect FORD PLANTS against accidental grounds

Following a serious ground at one of its largest assembly plants, Ford placed an emergency order for a Brunt Faultfinder, which pin-pointed the trouble immediately.

Since that initial purchase, Ford Motor Company, noted for shrewd buying of equipment, has ordered sixteen Brunt Faultfinders. These protect Ford Assembly Plants against production delays due to accidental grounds in normally ungrounded power circuits. And Ford is just one of many large companies using more than one Brunt Faultfinder.

One hour of production shutdown in an average plant can cost more than the Brunt Faultfinder that could have prevented it. This fast-working instrument locates grounds in circuits up to 550 volts a.c. or d.c. in minutes. No pulling of switches . . . no interference with production . . . can be used in dark or noisy locations . . . no delicate meters to adjust . . . traces pole line signals without climbing . . . easy one-man operation.

Order this useful instrument today or send for new descriptive booklet.

PARR MANUFACTURING CORP.
40 Austin Street Newark 5, N. J.

▲ For more details circle NED-198 E5 on enclosed inquiry slip ▲

Free HOOD GLOVE GUIDE

helps you choose the RIGHT glove for EACH job!

This handy Guide shows the comparative wear and chemical resistance properties of Hood Neoprene, Rubber and Plastic-Coated Gloves. Our complete, 12-page catalog describes and illustrates Hood Industrial Gloves — the choice for *every* job in *any* industry. *Write for your copy today!*

HOOD RUBBER CO.
a division of the B. F. Goodrich Company
Watertown, Mass.

▲ For more details circle **NED-199 E5** on enclosed inquiry slip ▲

USE ROLLPIN®

. . . eliminating hole-reaming operations and secondary fastening devices, Rollpin locks in place when driven into standard production drilled holes, yet can be easily drifted out and used over and over again. This slotted tubular steel spring pin with chamfered ends is as strong as a solid pin of the same diameter. It's simplifying assemblies and cutting costs for thousands of industrial users . . . and it can do the same for you. Design information available on request. Dept. R34-537.

ROLLPIN TRADEMARK
ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road • Union, New Jersey

▲ For more details circle **NED-200 E5** on enclosed inquiry slip ▲

GEAR PROBLEMS?

Check with-

FAIRFIELD!

If you use gears in the product you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD
Manufacturing Co.
2335 S. Concord Road
LAFAYETTE, INDIANA

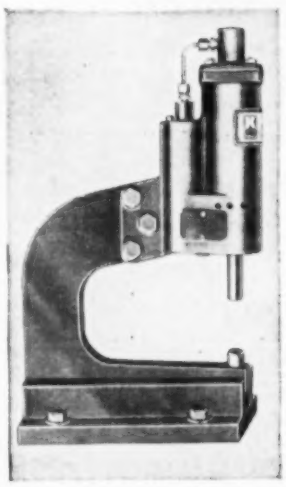
▲ For more details circle **NED-201 E5** on enclosed inquiry slip ▲

BOTTLE PUMP
protects contents against bacteria

This bottle pump for removal of distilled water and other liquids from carboys and tanks is designed to protect contents from airborne bacteria, dust, or radio-active mist. Air forced into container is automatically cleaned since it must first pass through Ventgard filter which removes and absorbs various impurities. Filter element is replaced after 1000 gallons of contained liquid have been pumped out. Matter as small as 0.2-micron is effectively removed. Made by **Barnstead Still & Sterilizer Co.**, 103 Lanesville Terrace, Forest Hills, Boston 31, Mass.

▲ For more details circle **NED-202 E5** on enclosed inquiry slip ▲

SPINNER RIVETER
heads formed without bending shank



Improvement made in this spinner riveter is an adjustment that allows air to be diverted either to the spinner or to the hammer for balancing the relative speed of the spinner and the amount of force behind the rivet set. Hammer blows become lighter as spinning speed is increased and heavier as spinning speed is decreased. Tool can be adjusted so that rivet heads are formed without danger of bending or swelling the shank, regardless of whether rivet is run through hollow sections, through wood sections or across open sections. Made by **Gardner-Denver Co.**, Keller Tool Div., Dept. N, Grand Haven, Mich.

▲ For more details circle **NED-203 E5** on enclosed inquiry slip ▲

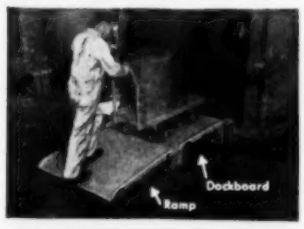
V-Belt Drive Data

Forth Worth Steel & Machinery Co.—V-belt drive selections, using new horsepower ratings and improved rating techniques as adopted by the Multi-V-Belt Drive and Rubber Manufacturers Associations, can be made quickly and accurately with illustrated Engineering Guide No. 50. Simplified formulas for standard quarter-turn and V-flat drives are augmented by tables of drives in all belt sections which have been compiled for quick selection of drives of required ratio and speed.

▲ For more details circle **NED-204 E5** on enclosed inquiry slip ▲

One-man, "do-it-yourself" handling equipment!

Every Magcoa Dockboard is designed for one-man, "do-it-yourself" handling . . . to help you eliminate both waiting time and lifting injuries.



Ramp-Dockboard combinations—Low dock, high truck problem solved with combination Ramp and Dockboard sections . . . *and each can be moved by one man.*

—And Yard Ramps for trailer and rail loading from ground level; *moved and positioned by one man.*

A new bulletin shows a variety of dock problems *and solutions.* It's titled, "What to do about it . . ." and is available on request.

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

▲ For more details circle **NED-205 E5** on enclosed inquiry slip ▲

Weller Guns solder while others warm up!

Weller Soldering Guns can make twenty or more electrical joints *before ordinary tools warm up.* The tip *heats instantly* when the trigger is pressed!

New Weller Guns offer wide choice in soldering heats —100, 135, 150, 200, 250, and now—*275 watts!* Whether it's 100/150 watt dual heat for instrument work —or 275 for electrical maintenance—there is a Weller Gun for every requirement!

Low-cost, replaceable tips, savings on current and solder —pay for a Weller Soldering Gun in a few months. Order from your distributor, or write direct for bulletin.

Better from Grip to Tip

Weller
SOLDERING GUNS

809 Packer Street
Easton, Pa.

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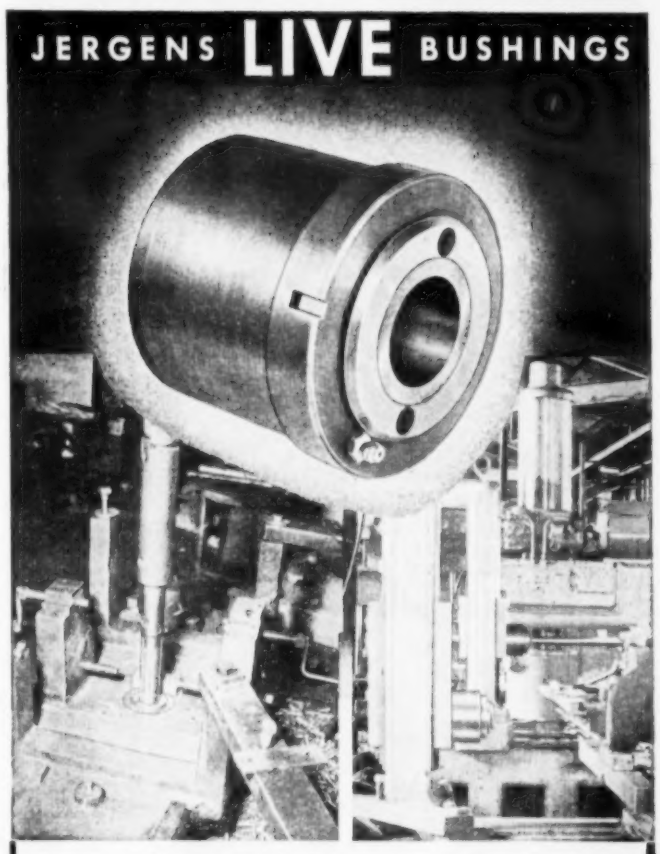
JERGENS LIVE BUSHINGS

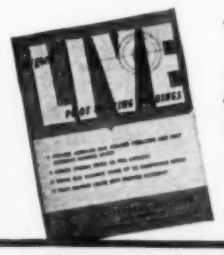


Jergens Bushing piloting application on radial drill press

Horizontal Boring Mill application

Eliminate Bushing Maintenance In Precision Mass Production

Jergens Live Bushings solve the problem of constant bushing wear, tool breakage, bar wear, scoring and chatter. They reduce loss of precision and production to a minimum. Rotating with the tool or pilot bar and incorporating an absolute seal against coolants and dirt entering the bearing cavity, Jergens Live Bushings make obsolete drill and jig bushings in precision mass production. Two sets of tapered roller bearings that adjust with wear to maintain concentricity give each Jergens Bushing radial load support. Jergens Live Bushings pay their cost many times over by reducing machining delays, tool costs and by permitting the use of carbide tools to full capacity on both new and old equipment.



Write for complete catalog

JERGENS DIVISION
DONLEY PRODUCTS, INC.
DEPT. NE-5
11106 Avon Ave., Cleveland 5, Ohio

▲ For more details circle **NED-207 E5** on enclosed inquiry slip ▲

FASTER Cleaner cut-off!

This fast, accurate machine by Stone combines all the advantages to make your cut-off operations more profitable.

Model M-35
Cut-off Machine

- Cuts ferrous or non-ferrous solids in 2 to 4 seconds per square inch.
- Geared-in-head motor, exclusive Stone feature, delivers full power to cutting edge.
- Leaves mill-like finish with tolerances of ±.005.
- Cuts bar stock, pipe, tubing, structurals and extrusions.
- Adjustable for 45° cutting —either direction.
- Capacity — Ferrous 1½" solids and 2½" pipe or structurals. Non-Ferrous — 2½" solids and 3" tubing and extrusions.

Machinery by Stone includes a complete line with many optional features. Let our representatives discuss your requirements with you. No cost or obligation; simply write or phone.

"Cut-off machinery by Stone . . . represented in every major industry throughout the world."

STONE MACHINERY CO., INC.
71 FAYETTE ST., MANLIUS, N. Y.

▲ For more details circle **NED-208 E5** on enclosed inquiry slip ▲

Announcing "ADJUSTABLE-STROKE" MIDGET Air-Clamp* CYLINDERS

*TRADE MARK

Now... put pressure where it's wanted instantly and cheaply, with Mead's powerful new midget air cylinders (1" bore, single-acting, spring return.) Stroke is adjustable. Use 'em singly or in groups to move, hold, press or eject small work pieces; to close and open large jigs, forms, fixtures. They'll replace human fingers and mechanical clamps in countless routine jobs.

New! —SAVE TIME!

These 6 brand-new Midget Air Clamp cylinders with adjustable strokes variable from ½" to 3' can be used where longer strokes are needed *and* stroke can be "tuned" to exact length wanted even *after* setup is made!

New! —SAVE AIR!

You can save air in large fixtures where dozens or hundreds of "Midgets" are used by adjusting stroke with special spanner wrench furnished with cylinder.

New! —SAVE SPACE & MONEY!

The "nose" on each "Midget" also telescopes into barrel reducing stroke and overall length to save space in cramped quarters! Each Mead "Midget" is guaranteed to give you millions of trouble-free cycles—to be a better value, dollar for dollar, than any comparable cylinder. Priced so low you can almost forget it!

Write Factory or Nearest Mead Man For Bulletin NA-55 (See Index Thomas' Register for address, phone.)

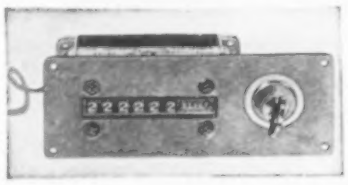
"MORE per hour with Mead Air Power"

PATHFINDER IN AIR POWER AUTOMATION

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., DEPT. NA55
CHICAGO 41, ILLINOIS

▲ For more details circle **NED-209 E5** on enclosed inquiry slip ▲

ELECTRIC COUNTER is designed for panel mounting



Equipped with panel mounting plate, model 6-Y-1-2-MF tamper-proof, tumbler-lock reset counter is electrically actuated. Entire unit can be placed into panel from the front and securely fastened. Capable of recording up to 1000 counts per minute, device has 9/64-in. wide by 3/16-in. high white figures on dark background for maximum visibility. It operates on 110-v 60-cycle ac. Figures cannot be changed without a key. Available from **Durant Mfg. Co.,** 1922 N. Buffum St., Milwaukee 1, Wis.

▲ For more details circle **NED-210 E5** on enclosed inquiry slip ▲

VENT-FILL CAP prevents evaporative gasoline loss

Three-pound pressure poppet incorporated in the No. 514 combination vent-fill cap offers protection against vapor loss, and 1-oz vacuum loading allows rapid withdrawal of liquid. Cap is also available with 1-lb pressure rating. A brass fire screen prevents intake of foreign matter and prevents flame from entering tank in case of fire. Cap is designed for locking when furnished with female threaded base. It is offered without base or with 2-in. pipe size nipple for attachment to female threaded tank flange. Made by **OPW Corp.,** Dept. NED, 2735 Colerain Ave., Cincinnati 25, O.

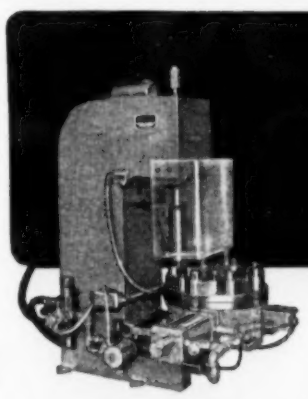
▲ For more details circle **NED-211 E5** on enclosed inquiry slip ▲

FIRE EXTINGUISHER UL-approved pressurized water type

Easily maintained at low cost, the Elk-Air 2½-gal pressurized water type fire extinguisher is recharged by replacing the water and pressurizing with compressed air same as filling an automobile tire. Unit is valve controlled. Easy-to-read pressure gage indicates if extinguisher is ready to use. It maintains a steady stream length of from 35 to 40 ft. It is UL-approved for Class A-1 incipient fires. Made by **Elkhart Brass Mfg. Co.,** Dept. EA, 1302 W. Beardsley Ave., Elkhart, Ind.

▲ For more details circle **NED-212 E5** on enclosed inquiry slip ▲

INCREASE PRODUCTION 50%



IT'S BEEN DONE—for a "big 3" auto company. Tooling shown increased production on press assembly of steering knuckles from 1200 to 1800 pieces per hour—with added operator safety.

COMPLETE SET-UP—#1405 Air Index Table, #C-300 5½ Ton Press, controls and fixtures were furnished by Air-Hydraulics, Inc. An electrical circuit synchronizes press and table for fully automatic operation on standard line pressures. Operator places pieces on fixture outside guard • Parts are indexed into position and pressed together • Assembly is removed automatically and chuted into container. Constant pressure throughout ram stroke has eliminated previous trouble caused by variations in stock thickness and other factors.

REPRESENTATIVES—Some territories still open. Write for information.

OUR NEW CATALOG IS READY NOW. Write for yours today.

AIR-HYDRAULICS INCORPORATED
811 BELDEN ST. • JACKSON, MICHIGAN

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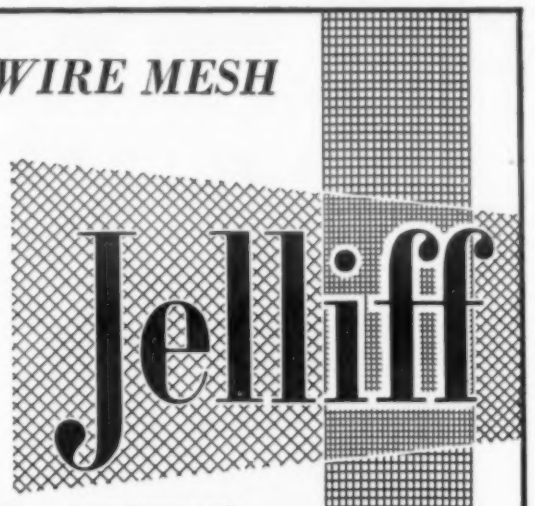
WIRE MESH



Specializing in the non-ferrous metals in counts to 200 x 200 or 50 x 750 and widths up to 48" in all commercial weaves

IN MESH WITH INDUSTRY

Since 1880

address your enquiries to Department 11

The C. O. JELLIFF MFG. CORP.
SOUTHPORT • CONNECTICUT • USA

WIRE PRODUCTS Jelliff SINCE - 1880

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new 20 PAGE PRECISION FINISHING handbook

"Shows how costs are cut in 40 precision finishing operations through use of Liquamatte Wet Blasting. Write for a free copy of Bulletin 451-D."

American WHEELABRATOR® *trail blazer of industrial progress*

AMERICAN WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit Street Mishawaka, Indiana

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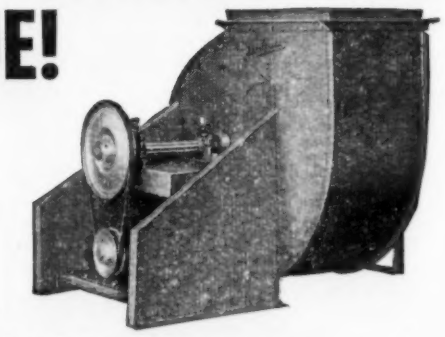
TOP VENTILATION VALUE!

*these versatile, lightweight "package" fans with the "Q" Factor**



You can't beat "Buffalo" Belted Vent Sets for quiet, economical ventilation of plants, warehouses or offices. High-efficiency "Buffalo" rotors and properly shaped housing scrolls give you the most air for your driving power. No expensive foundations required. Capacity can be varied at any time—motors and pulleys are easily changed. Non-overloading, regardless of system pressure. Models for indoor or outdoor installations. Also corrosion-resistant types. Write for Bulletin 3720A today!

"Buffalo"

*The "Q" Factor—the built-in Quality which provides trouble-free satisfaction and long life.

BUFFALO FORGE COMPANY
215 Mortimer Street Buffalo, N. Y.
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

INDUSTRIAL EXHAUSTERS • BELTED VENT SETS
PROPELLER FANS • "E" BLOWERS-EXHAUSTERS

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MAXITORQ
OVERLOAD RELEASE CLUTCH
Protects High-Speed Machinery

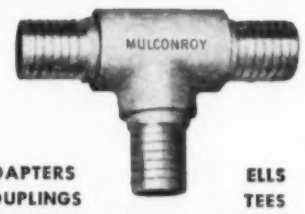
Automatic overload release feature eliminates costly shutdowns by protecting machinery and products from damage due to accidental overloading of mechanism. Specifically recommended for applications where nature of overload may be a heavy shock, or suddenly-applied load substantially greater than normal driving load. Simple finger-tip adjustment. Six capacities, ¼ to 5 h.p. at 100 r.p.m. Send for bulletin.

THE CARLYLE JOHNSON MACHINE COMPANY
1CJ55 DEPT. NE-5, MANCHESTER, CONNECTICUT

For more details circle NED-217 E5 on enclosed inquiry slip

METAL FITTINGS
For Flexible
PLASTIC PIPE...

Made exactly for Plastic Pipe Sizes. Assure easily-made, efficient, durable connections on every type of installation. Electroplated steel or Brass. *Ask your Distributor, or write for illustrated folders.*



ADAPTERS ELLS
COUPLINGS TEES
WELL-SEAL ELLS and PRIMING TEES • VENTURI JET ADAPTERS
UNDERGROUND SPRINKLER ELLS AND TEES • WATER MAIN ADAPTERS, ETC.

"MULCONROY *Starts...* WHERE OTHERS *Stop!*"

MULCONROY COMPANY Since 1887
5331 JEFFERSON ST., PHILADELPHIA 31, PA.

For more details circle NED-218 E5 on enclosed inquiry slip

BARNESDRIL
Honing Tools and Abrasives

Give You these Features

- Maximum Body Support At Cutting Edges — results in freer cutting and less spalling
- "Extra Deep" Plas-T-Clad Stones — provide more usable abrasive and more positive support closer to the cutting edge
- Plugmatic Sizing for Positive Bore-to-Bore Accuracy — sizes only on the bore, not affected by stone wear — self-aligning

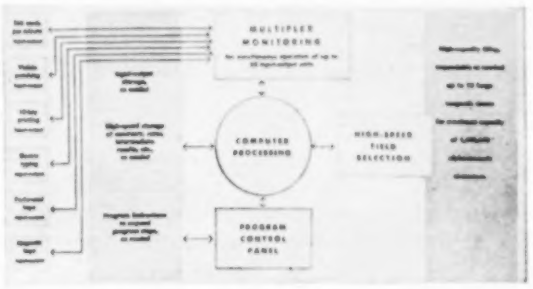
Write For Catalog 500Y

BARNES DRILL CO.
866 CHESTNUT ST. • ROCKFORD, ILLINOIS

For more details circle NED-219 E5 on enclosed inquiry slip

FILE-COMPUTER SYSTEM combines billing, inventory control and sales analysis

Customer orders can be processed immediately and completely in the order of their arrival, and up-to-the-minute figures on inventory and sales are available in-



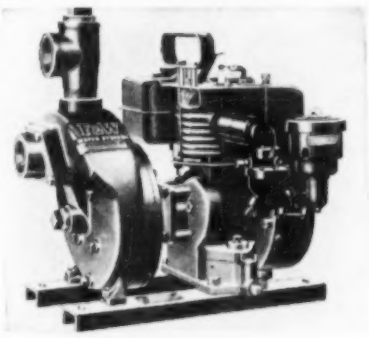
stantly by pressing a key on the Univac File-Computer. Millisecond access to any desired information within a mass of data filed on high capacity magnetic drums is provided by the system which eliminates most manual or machine steps.

Multiplexer unit of the system permits simultaneous operation of up to 24 different input-output units. In this way, up to 100,000 invoice line items or other input data can be processed in a 6-hour day, each handled according to its own program instructions. Input-output units can be in any combination of 80 or 90-column punched cards, paper or magnetic tape, typewriter of tenkey tape printing devices.

Transaction and control data for payroll, general ledgers, cost accounting, production control and other needs can be provided. System can be used for either a single large application or for several smaller applications simultaneously. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle NED-220 E5 on enclosed inquiry slip

CENTRIFUGAL PUMP delivers 100 gpm at 25-ft head



At 25-ft total head and 3600 rpm, this aluminum 1½ - in. centrifugal pump will deliver 100 gpm. Unit is designed for heavy duty intermittent or continuous pumping service and is especially suitable for rapid transfer of large quantities of water. It will handle water containing reasonable amounts of solids and abrasives. Engine is standard air-cooled, four-cycle, single cylinder unit rated at 2 hp. Pump is self-priming and has leak-proof seal, open-type impeller and replaceable wear plate. Made by **Flint & Walling Mfg. Co.**, 909 N. Oak St., Kendallville, Ind.

For more details circle NED-221 E5 on enclosed inquiry slip

The Bigger Difference Brings BIGGER TIME SAVINGS!

YOUR BRIGHTBOY DISTRIBUTOR CAN NOW FURNISH RUBBER-CUSHIONED STOCK ABRASIVES *MATCHED TO JOB* REQUIREMENTS!

These two widely-different Brightboy Wheels may *look* alike! Each has a wide and different application. *Either one could save you as much as 50% in finishing time!*

One of these wheels is compounded with SILICON CARBIDE, the other with ALUMINUM OXIDE. In *both grains* you have a wide selection of UNIFORM TEXTURES AND GRAIN SIZES RANGING FROM EXTRA FINE TO EXTRA COARSE, IN SOFT, FIRM AND TOUGH RUBBER BINDERS.

Multi-use Brightboy burrs, cleans, finishes and polishes in one operation. The precision finish frequently serves as the final polish. The unique action of rubber and abrasive, working together, give you a completely new, wider concept of finishing!

Ask your dealer about Brightboy, and for the new Brightboy catalog. Advise us if he cannot supply you. Write us on any problem where finishing is involved.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIV.
WELDON ROBERTS RUBBER CO.
95 North 13th Street, Newark 7, N.J.

America's Pioneer Manufacturer of Rubber-Bonded Abrasives.

For more details circle NED-222 E5 on enclosed inquiry slip

HOISTS • CRANES • WINCHES

NEW LOW PRICE ELECTRIC CHAIN HOIST

capacities to 2000 lbs.
lifts up to 60 ft.
prices start at $188.00

Robbins & Myers quality throughout, JC chain hoists are available from stock now, at new low prices! Features include: Special R & M hoist motor—Unit cast aluminum frame—Weston-type load brake—Sealed bearings throughout—Welded alloy steel link chain—Forged steel hook—Speed choice 34, 17, or 9 f.p.m.—Pendent rope control—Hook or trolley mounting. Write for Bulletin No. 852-B.

take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

For more details circle NED-223 E5 on enclosed inquiry slip

NEW! 'Sexauer' Monel Self-Locking bibb screw — 10 sizes do the work of 37!

NEW! 'Sexauer' Easy-Tite faucet washer with Fiberglas reinforcing

This nylon plug locks the screw *automatically!*

NEW! Amazing, patented screw and washer combination cuts faucet washer replacements 75%

— with each leak eliminated, you reduce water and fuel bills up to $28.80 quarterly

Most faucet washer failures are caused by wrong length screws. 'Sexauer' Self-Locking screws* and Easy-Tite washers* — used together — cut costly washer replacements 75%! You save up to $28.80 quarterly in water and fuel alone with each leak stopped. Here's how . . .

A screw *too short* for the tapping distorts and splits the washer when tightened; the washer works loose, is torn to shreds. If *too long*, it can't grip the washer; this ruins the washer and causes hammering in the water line.

Simplifies fitting problem—cuts installation costs

'Sexauer' Self-Locking screws eliminate the problem of misfit screws. They lock *automatically* at the required depth as the nylon plug is compressed in the faucet thread. The washer is not distorted, is held firmly.

You can re-use Self-Locking bibb screws repeatedly. Made of Monel, they resist corrosion, never rust; heads won't twist off, screw driver will not distort the slot.

Self-Locking screws save time spent in fitting the proper length — 10 sizes do the work of 37! Used with new, Fiberglas-reinforced 'Sexauer' Easy-Tites, they cut washer replacements 75%, fixtures last longer. Easy-Tites resist closing squeeze and excessively hot water, outlast ordinary washers 6 to 1!

Water and fuel savings

One dripping faucet wastes 8,000 gals. of water yearly. A pinhole size stream increases waste to 8,000 gals. in a *single month!* Here is what you save *quarterly* in stopping just *one* pinhole leak on a hot water faucet:

Fuel Saving			Water Saving	Total Saving
Oil	(198 gals.)	$22.77	$6.03	$28.80
Coal	(2,469 lbs.)	22.22	6.03	28.25
Gas	(21,103 cu. ft.)	21.20	6.03	27.23

Save water, fuel and labor costs; conserve costly fixtures by cutting washer replacements 75%! Use *new* 'Sexauer' Self-Locking screws and Easy-Tite faucet washers. *You save every time you do!*

WRITE FOR CATALOG. New 'Sexauer' Self-Locking screws and Easy-Tite washers are just part of the line of over 3,000 'Sexauer' Triple-Wear plumbing repair parts and patented precision tools. Send for our new, 126-page Catalog H. *Write today!*

*Reg. U. S. Pat. Off

J. A. SEXAUER MANUFACTURING CO., INC. Dept. AU-55
2503-05 Third Avenue, New York 51, N. Y.

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-224 E5 on enclosed inquiry slip

You Save Time and Money with PROTO Special Tools

DESIGNED FOR THE PROFESSIONAL TOUCH · SCREWDRIVERS · WRENCHES · PLIERS · PUNCHES · SPECIAL TOOLS · PULLERS

Special tools for difficult jobs can pay for themselves many times over! The facilities of the world's largest manufacturer of special tools are at your service. Ask your PROTO Distributor for details. Write for Special Tool Brochure No. 5328 to...

PLOMB TOOL COMPANY
2275K Santa Fe Ave.
Los Angeles 54, Calif.

CHECK YOUR NEEDS FOR SPECIAL TOOLS LIKE THESE

- Original equipment kits
- Tools to help break production "bottlenecks"
- Multiple-purpose tools
- "Giant" and "midget" sizes
- Tools for hard-to-get-at places
- Standard PROTO tools modified for your special needs

INQUIRIES INVITED ON FORGINGS OF ALL TYPES

"Give your work the PROfessional TOuch"

5566 PROTO TOOLS

Eastern Factory, Jamestown, N.Y.
Canadian Factory, London, Ont.

▲ For more details circle **NED-225 E5** on enclosed inquiry slip ▲

Working with plants throughout the country Elox found these interesting facts...

1. Some employees hide scrap
2. Some employees are afraid to report scrap
3. Some department heads won't admit the amount of scrap they actually have
4. Management didn't know how to solve the salvage problem

Today Elox equipped plants salvage 100% of scrap due to broken taps, drills, reamers, etc., profitably. Even on parts costing as little as 25c.

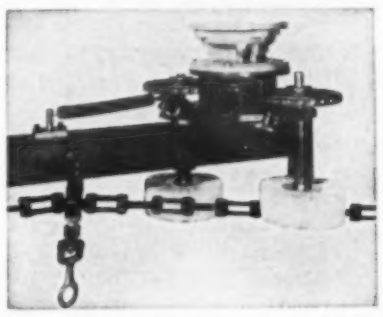
we can show YOU how!

elox corporation of michigan

738 N. Rochester Rd. • Clawson, Michigan

▲ For more details circle **NED-226 E5** on enclosed inquiry slip ▲

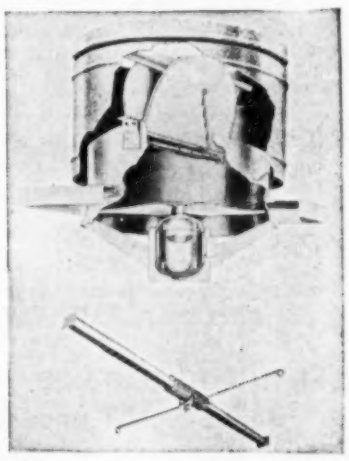
CONVEYOR CHAIN BRUSHER
removes accumulated dust and dirt



Two sets of Fullanchor wheel brushes on this conveyor chain brusher automatically remove dust and dirt which sticks to lubricating oil on hard-to-reach overhead conveyor chains. Unit functions without work stoppage and is mounted on the monorail supporting the chain conveyor. The two brushes, powered by one 1-hp motor, pivot on the motor base and bear against the chain. They can be swung away from the chain if only periodic cleaning is desired. Brush material is selected to meet individual problems. Made by **Fuller Brush Co.**, Machine Div., Dept. NED, 3530 Main St., Hartford 2, Conn.

▲ For more details circle **NED-227 E5** on enclosed inquiry slip ▲

VENTILATOR DAMPER OPENER
allows vent to open in case of fire



Thermally actuated emergency damper opener for Sky-Blast power roof ventilators allows ventilator to serve as venting device for smoke, heat and fumes in event of fire. It consists of twin alloy steel springs mounted on telescoping steel tube support and is independent of electrical equipment which might be damaged by fire or water. Two spring arms are held in place by fusible link which breaks when critical temperature is reached. Arms then open the dampers. Unit is offered in two sizes for roof ventilators from 24 to 60 in. diameter. Temperature ratings range from 135 to 360° F. Device functions independently of fan operation. Made by **Robbins & Myers, Inc.**, Propellair Div., Dept. C, 1345 Lagonda Ave., Springfield 99, O.

▲ For more details circle **NED-228 E5** on enclosed inquiry slip ▲

Remote Valve Control Systems

Stow Mfg. Co.—"Design Manual on Valve Remote Control Systems" is guide to the selection and application of flexible shafting, standardized valve operating gear for reach rods and new geared joints. Described are standard terminals for reach rods, flexible shafting and geared joints for any valve remote control installation.

▲ For more details circle **NED-229 E5** on enclosed inquiry slip ▲

OHIO WELD FASTENERS

Ohio Fasteners for application by resistance welding will give added *strength, stability, style* and *durability* to your products

Manufacturers of metal fabricated products are using Ohio Fasteners in increasing numbers because they simplify fastener assemblies.

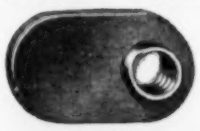
Over 400 Different Stock Parts

SHIPPING QUANTITIES 1000 TO 1,000,000 AND OVER

SOME TYPICAL STOCK PARTS

HW Screw
Thread Sizes #6-32 to 1/2-13

GW Screw
Thread Sizes #6-32 to 3/8-16



Sn Nut
Thread Sizes #6-32 to 3/8-16

WN Nut
Thread Sizes 1/4-20 to 3/8-16

Our 50th Anniversary (1905-1955)

SAMPLES AND INFORMATION AVAILABLE UPON REQUEST.

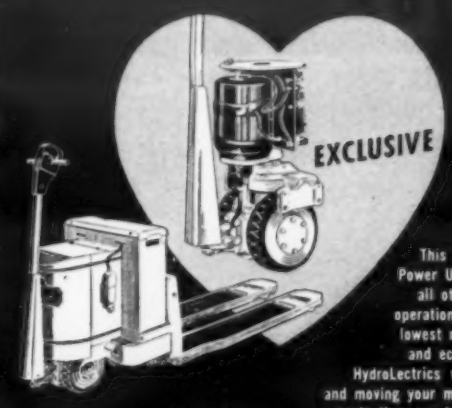
THE OHIO NUT AND BOLT COMPANY

Specialists in the Manufacture of Weld Fasteners and Adjusting Screws

14 First Avenue Berea, Ohio

▲ For more details circle **NED-230 E5** on enclosed inquiry slip ▲

HEART OF THE HydroLectric
THE DYNA-DUAL POWER UNIT



This sturdy Dyna-Dual Power Unit out performs all others for ease of operation—dependability—lowest maintenance cost and economy of power. HydroLectrics will keep rolling and moving your materials at lower costs than any truck in its class. Want proof? Complete facts and data on request.

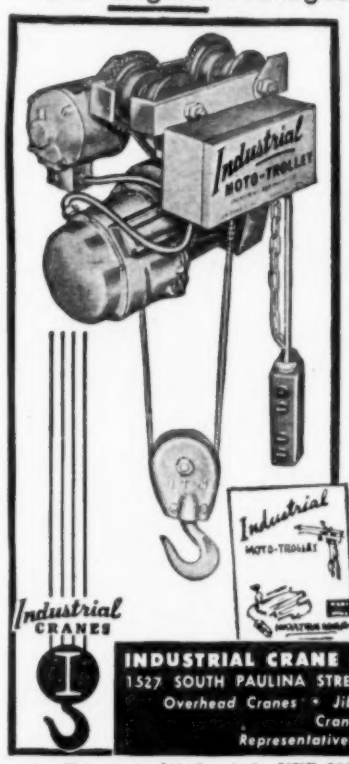
Note: The Dyna-Dual Power Unit is interchangeable on all models.

LIFT TRUCKS INCORPORATED
2423-31 Spring Grove Ave.
Cincinnati 14, Ohio

There is a model for every purpose to handle any kind of material

▲ For more details circle **NED-231 E5** on enclosed inquiry slip ▲

Industrial MOTO-TROLLEY
The Original Packaged Motor Driven Trolley



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST...

Adjustable to Accommodate Wide Variety of Beam Sizes

- Crown-tread machine steel wheels with hardened drivers.
- Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
- Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
- Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
- 4-button control station operates single speed trolley and hoist motions.

Write for Literature

INDUSTRIAL CRANE & HOIST CORPORATION
1527 SOUTH PAULINA STREET CHICAGO 8, ILLINOIS
Overhead Cranes • Jib Cranes • Monorail Systems
Crane Runways
Representatives in Principal Cities

▲ For more details circle **NED-232 E5** on enclosed inquiry slip ▲

READ SPEED with Jagabi®

For Averages in RPM or FPM... from 0-100 up to 0-100,000 rpm...use **Jagabi Chronometric Speed Indicators. Jagabi Tachoscope** provides stop watch and revolution counter for high accuracy work.

For Readings of Instantaneous Speeds or Variations in Speeds... 25 to 45,000 rpm...**Jagabi Centrifugal Tachometers** provide three and five ranges in one instrument.

BULLETIN 35-D

Send for Handy Selection Chart and Valuable Information on Speed Measuring in Bulletin 35-D.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle **NED-233 E5** on enclosed inquiry slip ▲

Norgren **Spray-Lube** System

- increased tap life
- eliminated problem of chips plugging coolant return lines
- eliminated messy working condition

FOR A-P CONTROLS CORPORATION

Machine taps 12 holes of various sizes simultaneously. Norgren Spray-Lube System, Model 60AA-2, includes 5 gal. tank, 12 mixing valves and spray nozzles.

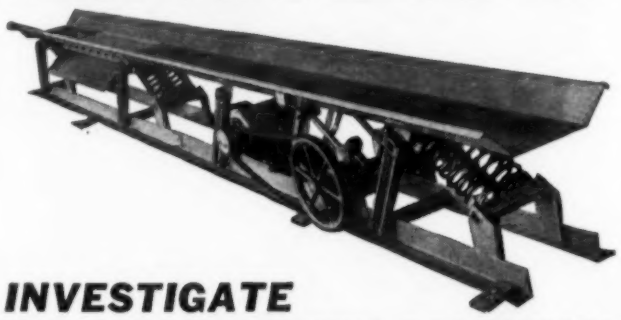
A-P ADDS 3 MORE
A-P Controls has since added Spray-Lube to three other machines.

C. A. Norgren CO.
3405 So. Elati, Englewood, Colo

For complete details write for NORGREN BLUEPRINT No. SL-4

▲ For more details circle NED-234 E5 on enclosed inquiry slip ▲

IF your present conveyors aren't doing a PERFECT job—



INVESTIGATE this amazing NEW CONVEYOR

IF your product is too hot, sharp or oily for belt or flight conveying, or too abrasive or sticky for screw or apron conveying — if you're getting excessive spillage, or if you have cleaning problems, etc. — *you owe it to yourself to investigate the Carrier Natural-Frequency Conveyor.*

These revolutionary conveyors are an entirely new *type* of vibrating equipment which substitutes Natural-Frequency spring action for brute force. Where "brute-force" conveyors may use up to 90% of their power to operate their moving parts and only about 10% to convey their loads, *the Natural-Frequency Conveyor uses substantially no more power to operate, empty, than is required to run the motor alone.*

Carrier Natural-Frequency Conveyors (including vertical vibrating spiral types) are now being used in dozens of the largest companies in America. Write for Bulletin 111, *today.* Carrier Conveyor Corporation, 213 N. Jackson St., Louisville 6, Kentucky.

CHECK THESE CARRIER ADVANTAGES!

HIGH CONVEYING SPEED (Up to 100 feet per minute)
GREATER CAPACITY (Up to 200 tons per hour)
LESS POWER REQUIRED (About one-third as much as "competitive" equipment)
LESS MAINTENANCE & DOWN-TIME (Less power+good design= trouble-free performance)
NO DAMPENING UNDER LOAD (Designed with extra power for specified load, with positive stroke)
SELF-CLEANING (Continuous, smooth trough —no pockets)
COMBINES PROCESSING WITH CONVEYING (Can screen, dry, cool, dewater, blend, etc.)
WIDTHS FROM 6" TO 48" LENGTHS FROM 5' TO 250' (With pans 16 ga to ½" plate, of any metal, open or enclosed)
BALANCED, VIBRATION-FREE UNITS AVAILABLE (For use on ceilings or light floor construction)

CARRIER NATURAL-FREQUENCY CONVEYORS

▲ For more details circle NED-235 E5 on enclosed inquiry slip ▲

MOTORIZED HOPPER
feeds parts accurately to machines

Usable on presses, grinders, machine tools and automated equipment as well as for sorting, counting and inspecting operations, this model 160 rotary hopper automatically feeds parts into as many as four separate feeding tracks. Fully-enclosed continuous-duty motor drives hopper through a slip clutch which is readily adjustable for overloads. Gearing is mounted on ball-bearing shafts and operates in oil bath. Three-point base facilitates mounting, and unit is adjustable for best feed angle. Made by **Feedmatic, Inc.,** 22521 Telegraph Rd., Detroit 19, Mich.

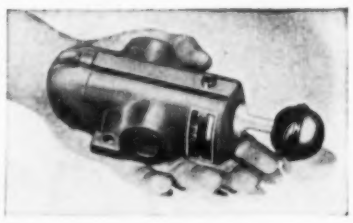
▲ For more details circle NED-236 E5 on enclosed inquiry slip ▲

LIGHTING REFLECTOR
aluminum resists discoloring

Hard anodic treated surface of this aluminum reflector for medium and high bay lighting resists discoloring and tarnishing and, being practically nonporous, it is easily cleaned. Slotted neck ventilation induces an updraft which quickly dissipates heat and carries airborne dust and dirt through the reflector. It is supplied with neck extensions for 400-w mercury vapor or 750, 1000 or 1500-w incandescent lamps, in socket-reflector or separable socket styles. Made by **Jones Metal Products Co.,** Abolite Lighting Div., 194 Siegrist Rd., West Lafayette, O.

▲ For more details circle NED-237 E5 on enclosed inquiry slip ▲

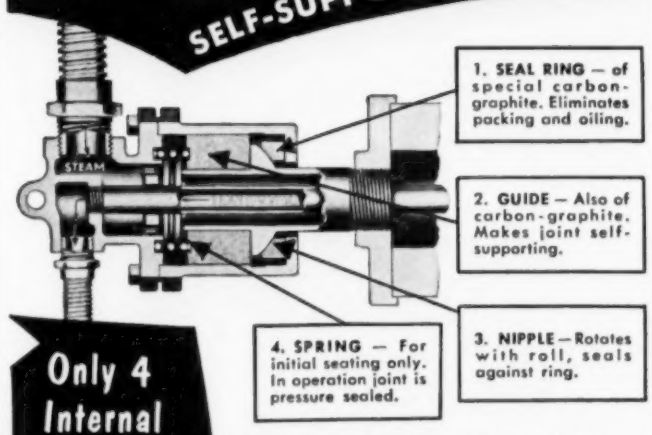
HYDRAULIC VALVE
locking on-and-off type



Built with capacities from 8 to 10 gpm, this lightweight push-pull, on - and - off valve is manually operated, but can be adapted to remote control. The model 23 locking type unit will cut off all flow at pressures up to 1000 psi. Mounting can be in any position. It is equipped with dust and moisture seals and measures 8½ x 3¼ in. Made by **Wisconsin Hydraulics, Inc.,** 3166 N. 30th St., Milwaukee 16, Wis.

▲ For more details circle NED-238 E5 on enclosed inquiry slip ▲

JOHNSON Rotary Pressure JOINT
SELF-SUPPORTING TYPE



Only 4 Internal Parts

For introducing steam and liquids into rotating rolls and cylinders, there's nothing like the Johnson Joint above. It's packless, self-lubricating, self-adjusting, self-supporting. It has been adopted by dozens of machinery makers, and is finding new uses every day.

Type SB shown handles both steam and condensate through same head; also available for through flow service, and in sizes and styles for all operating conditions. ***Write for literature.***

The Johnson Corporation
812 Wood St., Three Rivers, Mich.

▲ For more details circle NED-239 E5 on enclosed inquiry slip ▲

50th Anniversary Year

Bond ...for fifty years
Your Best Buy in Materials Handling Equipment

1-A Series— Stationary Caster

36-A Series— Double Ball Race Swivel Caster

Bond Self Load— Unload Drum Truck

Bond Universal Lift Jack and Platform

As Bond Foundry starts its second fifty years of service, we pledge again a constant effort to design and build the finest equipment. Whatever the materials handling equipment you need, your best buy will always be Bond.

BOND FOUNDRY & MACHINE CO.
Manheim, Pa.

1905 **Bond** 1955
For Half a Century Prime Movers in Materials Handling

▲ For more details circle NED-240 E5 on enclosed inquiry slip ▲

"SHADE"
Remarkable Vinylite Sheeting that ABSORBS Heat and Glare

SHADE will never become brittle or crack even in temperatures from −25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, bonded to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will never come off until you pry up a corner and strip it off yourself.

WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

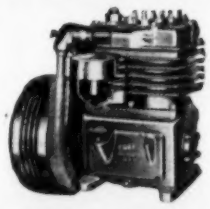
COLOR CHOICES
Colors are available in FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, TRANSPARENT BLUE, FILTERED WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACK-OUT BLACK.

TRANSEAL, Ltd.
Dept. NED, 100 Oak Tree Ave., South Plainfield, N. J.
Telephone PLainfield 6-3800

▲ For more details circle NED-241 E5 on enclosed inquiry slip ▲

GET MORE PRODUCTION PER MAN HOUR
with the Help of Dependable Efficient
Curtis

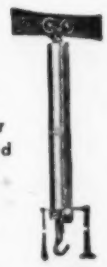
Air Compressors



Available up to 320 cu. ft. Can be supplied base mounted up to 50 H.P. or tank mounted up to 15 H.P. Timken bearing equipped ... precision built.

Air Cylinders and Hoists

To lift, lower, push, or pull



Pendant air hoist is ideal for lifting or lowering—Bracketed Air cylinder can be mounted in any position for lifting, lowering, pushing or pulling.

For more information write to:

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.
1979 Kienlen Avenue • St. Louis 20, Missouri
764

100 Years of Successful Manufacturing Experience

▲ For more details circle NED-242 E5 on enclosed inquiry slip ▲

Carrier's Experience Proves

KLIXON
Thermo Snap®
CONTROLS

are Dependable and Service Free

Carrier Unit Heaters have long been known for their heating efficiency and outstanding performance.

To insure accurate temperature control in their gas-fired unit heaters, Carrier uses Klixon Thermo-Snap Temperature Controls. Mr. Theodore F. Stone, Chief Product Engineer, writes: "We have used Spencer Klixon fan and limit temperature controls on our units for 6 years and have always found them to be dependable, service free and in accordance with specifications."

What's your temperature control problem . . . low and high limit controls, fuel delay switches, tube and rectifier cooling, fan switches, operating control . . . Klixon Thermo-Snap Controls are meeting the requirements for these and other applications in military and civilian products, daily.

Klixon Thermo-Snap Controls are available in many hermetically sealed and open types in a wide variety of operating temperature ranges.

Klixon Engineers, specialists in temperature control applications, can help you work out your specific application details. Write for their help or further information.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1905 FOREST ST., ATTLEBORO, MASS.

KLIXON

▲ For more details circle **NED-243 E5** on enclosed inquiry slip ▲

ELECTRONIC COUNTER
counts up to 1 million in 1 second

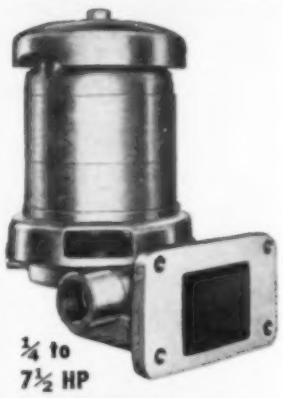
Mass counting of assorted machine parts such as nuts and bolts and counting impurities in such raw materials as powdered chemical are industrial applications for the Iconumerator, an electronic counting device. It can count up to 1 million objects of varying shapes and sizes in 1 second. Device "sees" objects placed in a compartment at the front of the unit, counts them one by one, remembers what it has counted and transfers the results to an electrical tote board where they appear as lighted numbers. Unit can be attached to an electrical printing machine which provides answers in printed form. Principle of flying spot scanning is utilized by the counter, available to accommodate any number of counts. Illustrated unit counts up to 999,999. Made by **Allen B. Du Mont Laboratories, Inc.**, Instrument Div., 750 Bloomfield Ave., Clifton, N. J.

▲ For more details circle **NED-245 E5** on enclosed inquiry slip ▲

PEERLESS TYPE CP & TCP
Fluidyne.

VERTICAL FLANGED SUCTION
CIRCULATING PUMPS

LOADED WITH HIGH QUALITY FEATURES: Heavy duty new NEMA type motors. Corrosive-resistant, stainless steel shaft. New, ceramic-plastic shaft seal. All-bronze, threaded impeller. Strong, non-porous Meehanite iron bracket and volute. Ask for complete details, including price, performance data. Request Bulletin IE-155.



¼ to 7½ HP
Provide Permanent Dependability Economy and Good Looks
when designed into your

AIR CONDITIONING SYSTEMS
COOLING TOWERS
CONDENSER SYSTEMS
CONDENSATE AND HOT WATER CIRCULATION
MACHINE TOOL COOLANT SYSTEMS
LAUNDRY EQUIPMENT

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
Address inquiries to Factories at: Los Angeles 31, California and Indianapolis 8, Indiana.
Offices: New York, Indianapolis, Chicago, St. Louis, Atlanta, Plainview and Lubbock, Texas; Fresno, Los Angeles, Phoenix, Albuquerque.

PEERLESS PUMPS

Distributors in Principal Cities. Consult your Local Telephone Directory

▲ For more details circle **NED-248 E5** on enclosed inquiry slip ▲

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
FINISHING TIME
TOTAL ELAPSED TIME

Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

Agents in Principal Cities; Ask for a Demonstration—Call or Write Dept. 302

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to:

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

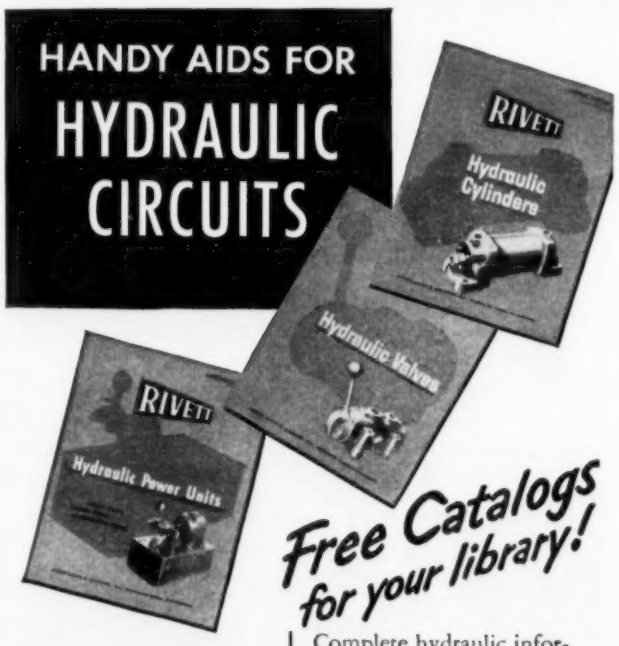
▲ For more details circle **NED-244 E5** on enclosed inquiry slip ▲

PRESS CONVEYOR
carries small parts from machines

Hydraulic ram adjustment at the discharge end regulates discharge height of series 675-J Press Helper line of conveyors for carrying small parts away from production machines and presses. Automatic "trap loading" eliminates need for flipper gates, prolongs belt life and prevents clogging. Although designed for small parts, with cleats on 6-in. centers, conveyor can be modified to accommodate larger parts. Belt widths of 5, 8, 10 and 12 in. are available, and speeds are variable from 30 to 90 fpm. Portable mounting is optional. Made by **Metzgar Conveyor Co.**, 416 Douglas St. N. W., Grand Rapids 4, Mich.

▲ For more details circle **NED-246 E5** on enclosed inquiry slip ▲

HANDY AIDS FOR HYDRAULIC CIRCUITS



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24 pages of Engineering Data, Specifications and Working Drawings.

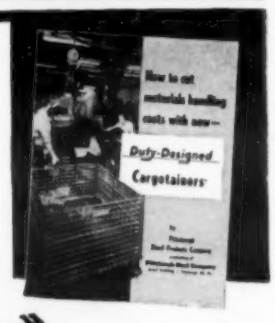
Complete hydraulic information—easy to use—Simplifies your circuit problems.

SEND FOR YOUR COPIES TODAY!
RIVETT LATHE & GRINDER, Inc.
Dept. NED5 Brighton 35, Boston, Mass.

RIVETT furnishes a complete power package

▲ For more details circle **NED-247 E5** on enclosed inquiry slip ▲

How to reduce materials-handling costs!



Did you know you can get Cargotainers® "Duty-Designed" for your particular products? Cargotainers are now working for some of America's largest manufacturers handling everything from auto parts, thread, smoked ham, plastic, electrical equipment—yes, even to the U. S. mail. Cargotainers pay for themselves quickly because they reduce damage to merchandise and equipment, double storage space, speed production, save labor.

A new 24-page illustrated manual has just been published. Regardless of the type or kind of products you make, you should have a copy. It's yours for the asking. **Pittsburgh Steel Products Company, 1407 Grant Building, Pittsburgh 30, Pennsylvania.**

▲ For more details circle **NED-249 E5** on enclosed inquiry slip ▲

this book shows you how to

Reduce machine noise and vibration 60-85%.
Avoid floor drilling by mounting machines the modern way, without bolts or lag screws.
Reduce maintenance costs by eliminating transmitted vibration which damages machines, floors and buildings.
Save time and money when installing new machinery or repositioning present machinery.

Write today for your free copy of "Why It Pays To Anchor Your Machines With UNISORB."

THE FELTERS COMPANY
224 South Street, Boston 11, Massachusetts

UNISORB® MOUNTINGS are used with our special adhesive. UNISORB is also available precoated with adhesive, for use with machines that do not require shimming.

▲ For more details circle **NED-250 E5** on enclosed inquiry slip ▲

Difficult *PACKAGING* Problems handled with ease.
Let us show you How/PHONE OR WRITE

ALLEGHENY STEELBAND COMPANY
BOX 716 • PITTSBURGH 30, PA. • WAlnut 1-7100

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The huge draw die above measures about 3 feet wide, 4 feet long, and 2½ feet deep. The plastic face of the die cavity and punch, approximately ⅜ inch thick, are made of Rezolin Toolplastik based on BAKELITE Epoxy Resins and compounded by **Rezolin, Inc.,** Los Angeles, Cal.

25% LESS COST
40% LESS TIME
to face this die with epoxy resins

"Rezolin" tooling compounds, based on BAKELITE Brand Epoxy Resins, are liquid materials. Thus, a simple casting operation formed this die face to the desired shape. By mixing the liquid resin with a liquid hardener before pouring, it was cured at room temperature. No applied heat or pressure was needed. Shrinkage was so slight that finishing operations were kept to a minimum.

When cured, these epoxy resin compounds are hard and tough, with excellent impact, compression, and flexural strengths. Dimensional stability is outstanding. These properties are also important to such lightweight metal-working tools as jigs, spotting racks, and Keller models, constructed by laminating the compounds with glass cloth.

Fast tooling when model changes are frequent calls for this modern, efficient method. Start your program now with compounds based on BAKELITE Epoxy Resins. Write Dept. GV-119.

BAKELITE BRAND EPOXY RESINS

BAKELITE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
In Canada: Bakelite Company
Division of Union Carbide Canada Limited, Belleville, Ontario
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC

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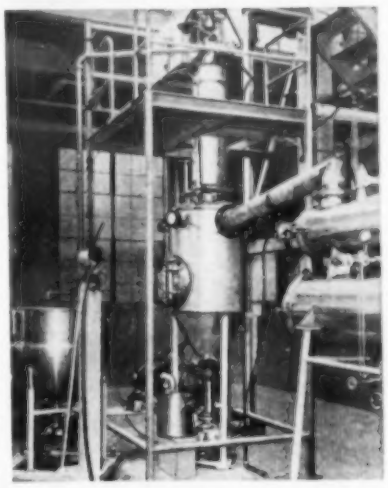
LIQUID EVAPORATOR
for heavy viscous materials



Evaporation of such heavy, viscous liquids as plastics, resins, glues and foods to high concentrations can be carried out by the RotoVak concentrator. Easily cleaned and maintained, equipment passes materials rapidly to prevent or minimize decomposing or grading of heat-sensitive products by prolonged heating. Concentration takes place in one pass. Heat is supplied by steam, Dowtherm or other heating media. Concentration is controlled by varying steam pressure or feed rate. Equipment is built in a variety of sizes, with specifications of materials and accessories depending upon conditions of use. Made by **Blaw-Knox Co.,** Buflovak Equipment Div., 2068 Farmers Bank Bldg., Pittsburgh 22, Pa.

▲ For more details circle **NED-253 E5** on enclosed inquiry slip ▲

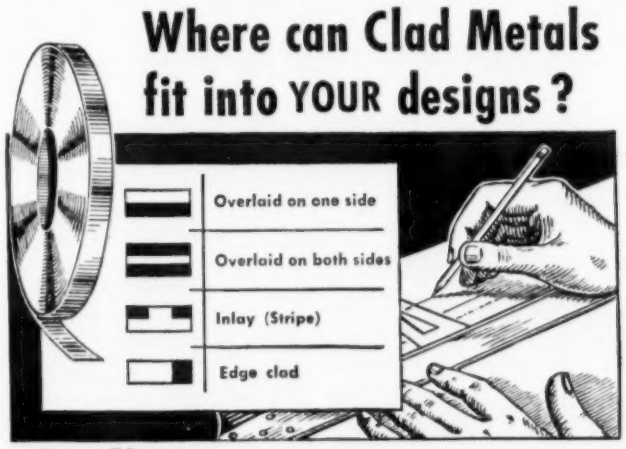
HIGH SPEED MARKING PRESS
will production mark at rate of 2500 parts/hour

Air-operated and electronically-controlled model 400 dial feed press for production marking will produce serial-numbered work pieces at rate of 2500 parts per hour. Basic unit has Noblewest Cyclomatic control which provides continuous automatic cycling at any speed to suit operator. Loading time and marking dwell can be varied independently. Machine can also be used for crimping, staking, forming and riveting.

Automatic numbering head on press shown indexes with each stroke of press to stamp progressively higher number on plastic parts. Numbering head wheels are heated by cartridge heater located within numbering head spindle. Miniature adjustable thermostat in head frame controls temperature. Both press head cylinder and dial table cylinder are operated by four-way pilot-operated solenoid valves. Mufflers are installed in both valves for quiet operation. Made by **Noble & Westbrook Mfg. Co.,** 7 Westbrook St., East Hartford, Conn.

▲ For more details circle **NED-254 E5** on enclosed inquiry slip ▲

Where can Clad Metals fit into YOUR designs?



CLAD METALS offer combinations of properties that no single metal can provide. Precision rolled to your specifications on highly specialized equipment at American Silver, by processes that assure an excellent metallurgical bond.

TYPICAL CLAD METALS produced by American Silver:
Silver-clad copper for replacing solid silver in contacts.
Silver-clad phosphor bronze for current-carrying springs.
These and many non-precious combinations are quickly available—with overlays on one or both sides, inlays or edge cladding—in total thicknesses down to .001" and overlay thicknesses down to .00005".

Clad metals can now offer you new, more compact designs as well as production savings. Tell us what you'd like to accomplish: we'll be glad to make our recommendations.

Industrial Metals Division
AMERICAN SILVER COMPANY, Inc.
36-08 Prince Street, Flushing 54, N. Y.

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Linde synthetic sapphire
...for excellent optical transmission
PLUS physical strength and chemical inertness

Sapphire is hard, strong, chemically inert and transmits a high percentage of radiation in the important ultra-violet and infra-red regions. At 1750A forty per cent of the radiation is transmitted by a .059 inch section; at 5.7 microns forty per cent is transmitted by a .100 inch section. This unique combination of properties makes it ideal for optical systems that require resistance to abrasion and corrosion and high temperature strength as well as excellent optical transmission.

Now single-crystal sapphire windows are available in diameters up to 2 inches in several finishes. For further information, call or write your nearest LINDE office.

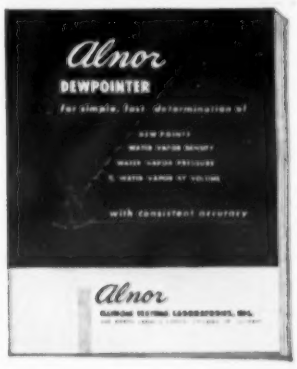
LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street, New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY
Division of Union Carbide Canada Limited, Toronto

"Linde" is a registered trade-mark of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-256 E5** on enclosed inquiry slip ▲

get this
free
INFORMATIVE BULLETIN

Learn how easy it is for anyone to determine dew points quickly and accurately with the
ALNOR DEWPOINTER!



Only the Alnor Dewpointer has a sealed testing chamber, where atmospheres can be analyzed under controlled conditions . . . where the fog is observed *suspended in air* for fast, positive readings. Completely self-contained and readily portable for laboratory accuracy anywhere in the plant or field. And simple, direct operation enables even nontechnical personnel to easily obtain precise results, time after time.

Tear out this ad and send it along with your business letterhead to Illinois Testing Laboratories, Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle **NED-257 E5** on enclosed inquiry slip ▲

THE Improved **FLEX-A-FOAM DUST MASK**

Your best ounce of protection against
IRRITATING DUST

HERE'S WHY:

★ **Workers wear it** Lightweight (just 1 ounce), snug, comfortable and easy-to-breathe through, Flex-a-Foam is the *one* respirator your workers actually *welcome*.

★ **It's super-efficient** Flex-a-Foam's pure latex filter protects against nuisance dust particles 100 times smaller than the eye can see!

★ **It's simple** Only four sturdy, long-wearing parts — all interlocking — all *unconditionally* guaranteed.

★ **And—it's economical** *Low first cost* — less than any other *quality* respirator on the market. *Low upkeep* — washable filter outlasts throwaway type by more than 100 to 1!

Dust Protection Your Workers Will Welcome and *Wear*

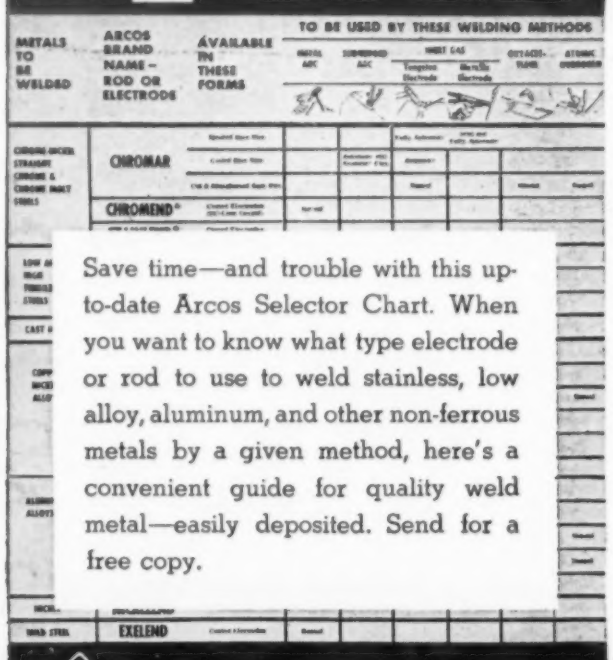
SAMPLE STILL ONLY $1.40 POSTPAID INDUSTRIAL PRICE ONLY

FLEX-A-FOAM® DUST MASK

FLEXO PRODUCTS, INC., CLEVELAND 13, OHIO

▲ For more details circle **NED-258 E5** on enclosed inquiry slip ▲

NEW Filler Metal Selector Chart FOR ALL WELDING METHODS

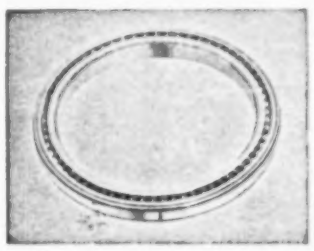


Save time—and trouble with this up-to-date Arcos Selector Chart. When you want to know what type electrode or rod to use to weld stainless, low alloy, aluminum, and other non-ferrous metals by a given method, here's a convenient guide for quality weld metal—easily deposited. Send for a free copy.

ARCOS CORPORATION
1500 South 50th Street, Philadelphia 43, Pa.

▲ For more details circle NED-259 E5 on enclosed inquiry slip ▲

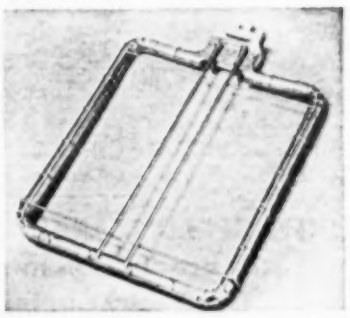
INSTRUMENT BEARINGS
thin-section type with shields



Bore sizes offered in line of thin-section instrument bearings range from 0.6250 to 3.1245 in. The high load capacity, long life bearings have one-piece synthetic retainers, full ball complement and integral shielding. Alternate ball series has slightly undersize alternate balls which act as spacers, providing the bearings with low and constant torque values at low and moderate speeds. Made by **Split Ballbearing Corp.**, Lebanon, N. H.

▲ For more details circle NED-262 E5 on enclosed inquiry slip ▲

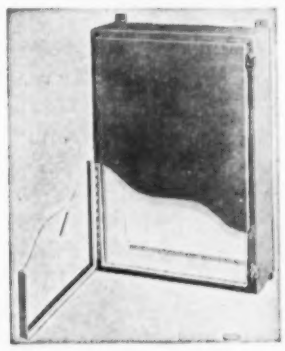
ELECTRIC HEATING UNIT
directs heat where it is wanted



Originally developed for use in electric ranges, Reflectube electric - heating unit has application on other products, ranging from clothes dryers and room conditioners to space heaters and industrial ovens. Unit employs a continuous steel reflector attached on one side of open-type element to direct heat where it is wanted. Construction creates turbulence which is said to circulate air freely to all parts of oven, eliminating cold spots. Made by **Ferro Electric Products, Inc.**, Dept. RH, Kirkland, Ill.

▲ For more details circle NED-263 E5 on enclosed inquiry slip ▲

CONTROL PANEL ENCLOSURES
liquid tight, made in 15 sizes



Constructed to be completely liquid tight, 15 sizes of NEMA type 12 sheet metal panel enclosures are made without holes, and have welded seams and covers gasketed with neoprene sponge. Sizes range from 16 x 12 x 6 in. to 60 x 36 x 8 in. Enclosures have external mounting feet and print holder on the inside of the continuous hinged cover. A removable mounting panel for electrical equipment is furnished. Interior finish is baked white enamel and exterior is prime coated. Made by **Hoffman Engineering Corp.**, 1059 Tyler St., Anoka, Minn.

▲ For more details circle NED-264 E5 on enclosed inquiry slip ▲

Cut Fire Losses with These Firefighters

Rockwood Double Strength FOAM covers burning surfaces faster, seals off combustible vapors and flows freely around obstructions — even at sub-zero temperatures. Three parts FOAM mixed with 97 parts water form a foam blanket that re-seals if broken. Because it's concentrated, FOAM saves storage space and shipping costs.

Rockwood WET increases firefighting action of water, is a great aid in putting out deep-seated fires involving combustibles such as wood, paper, cloth. Also excellent wherever water is scarce. With WET, rekindling is reduced.

Use Rockwood's FOAM Eductor and Type SG-60 Nozzle for introducing these firefighting liquids into your hose lines. For complete details, write for free, illustrated Rockwood catalog, "Fire Fighting Products." Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
345 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

▲ For more details circle NED-260 E5 on enclosed inquiry slip ▲

NoDrip® ...STOPS CONDENSATION DRIP

NoDRIP PREVENTS RUST — ANYONE CAN APPLY

NoDrip plastic coating is easily applied to tanks, containers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless 100% moisture-proof covering that is effective as soon as dry. Acid, alkali and brine resistant.

FREE... Interesting 32-page Handbook shows what NoDrip is and what it does. **SEND COUPON TODAY**

SEND NoDRIP HANDBOOK
NAME_____
ADDRESS_____
CITY_____ STATE_____

J. W. MORTELL CO. • 526-E BURCH ST. • KANKAKEE, ILL.
TECHNICAL COATINGS SINCE 1895

▲ For more details circle NED-261 E5 on enclosed inquiry slip ▲

FLEXPIPE...new standard flexible pipe connector

- permits travel
- absorbs vibration
- connects misaligned ports

EASY TO INSTALL . . . standard male pipe fittings at each end thread quickly to companion fittings. Saves time and materials—Flexpipe* takes the place of rigid connections made up with elbows, couplings and short runs of pipe. Conveys air, gas, oil, steam or water.

Seamless, tin bronze tubing, corrugated for flexibility. 100% tight. No packing. Wire braid covering for extra strength. Low cost. Available in diameter sizes ¼" through 2", in over-all lengths 8" through 28".

SOLD BY leading plumbing supply houses. For literature on standard sizes and lengths, write to *The American Brass Company, American Metal Hose Branch, Waterbury 20, Conn.* In Canada: *The Canadian Fairbanks-Morse Co., Ltd.* 65206

*Trade Mark

Flexpipe
AN **ANACONDA®** PRODUCT

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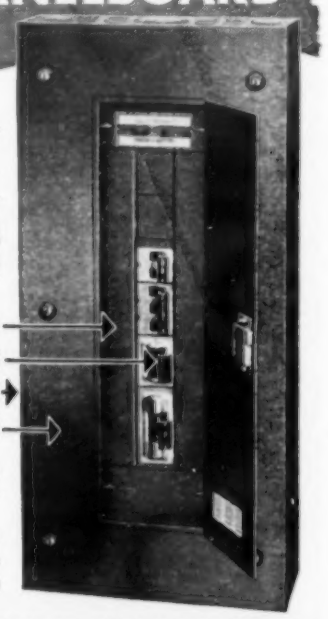
SQUARE D's
MHP DISTRIBUTION PANELBOARD



So easy to order and stock. "Off-the-shelf" delivery of packaged components!

INTERIOR
"PLUG-IN" BREAKERS
BOX
TRIM

for 240 Volt, 3 Phase, 3 or 4 wire power systems.

Write Square D Company, 6060 Rivard St., Detroit 11, Mich., for descriptive bulletin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS
SQUARE D COMPANY

▲ For more details circle NED-266 E5 on enclosed inquiry slip ▲

UP! UP! UP! TO ANY DESIRED HEIGHT

EASILY... SAFELY... ECONOMICALLY

HI-LIFT EXTENSION **SCAFFOLD**

Models extend from 6 ft. 10 in. (can be made lower) to any desired height. Hand or electrically operated. Comes to you ready for work — no erection required, no loose parts. Built to meet individual requirements. Ideal for painting, lighting, cleaning, and all overhead maintenance. Pays for itself in time and labor saving.

MOST VERSATILE SCAFFOLD ON THE MARKET

Set up in aisles and work on both sides. Resting on roof trusses. Over machines in factories, in warehouses, bank cages, etc. Straddle seats in theaters, auditoriums, etc.

Write for Complete Literature

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

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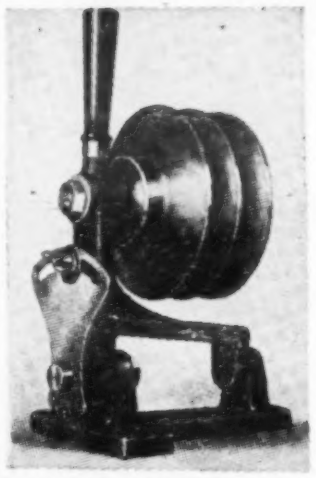
VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Adv.**

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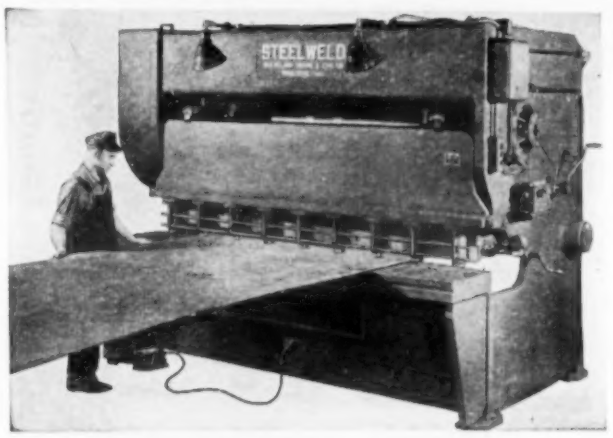


ALL STEELWELD SHEARS
Controlled Electrically!

Convenient electric foot-switch operation is standard for all Steelwelds *Pivoted-Blade* Shears. The switch can be slid around floor to wherever handiest. It eliminates tiresome leg lifting required for usual mechanical foot treadle.

Steelweld Shears are built in all sizes for plate to 1-1/4" thick. Get the facts on these truly modern machines.

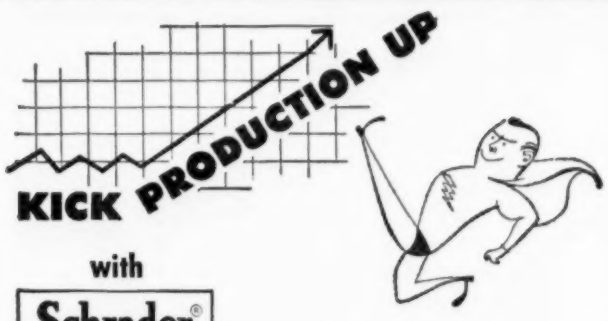
STEELWELD Pivoted-Blade SHEARS CATALOG No 2011

Send for free Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6609 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

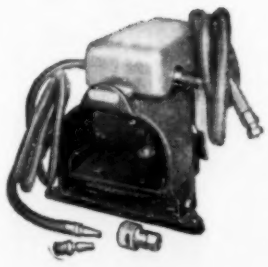
▲ For more details circle **NED-269 E5** on enclosed inquiry slip ▲



with

Schrader®

foot-operated air valves



This valve – for use on power presses, shears, spot welders, etc.–requires only a ½" stroke, keeps the operator's foot on the floor. Pedal has a spring in it for repetitive operations, or it can be locked down by a simple sideways motion. Though the unit is portable, it is substantial enough to prevent dislocation, or "creeping." Especially designed for maximum safety, the unit has a protective covering to prevent accidental tripping.

Write for your copy of the Schrader Catalog for complete information.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. O-5, Brooklyn 38, N. Y.

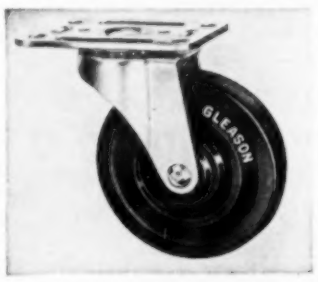
▲ For more details circle **NED-270 E5** on enclosed inquiry slip ▲

HANDLING TRUCK
tip type has 10-bushel capacity

Tip - type model BTS3 steel box truck for materials handling of production work and warehouse duty measures 42 x 24 x 30 in. overall and has 10-bushel capacity. Double-flanged heavy-steel top edge and reinforced corners are featured. Truck is mounted on two central stationary 3-in. casters with one 3-in. rubber swivel caster at each opposite end. Box bottom is reinforced with angle channels. Made by **Western Metal Bed Co.,** Dept. 41-34, 3000 E. Hedley St., Philadelphia 37, Pa.

▲ For more details circle **NED-271 E5** on enclosed inquiry slip ▲

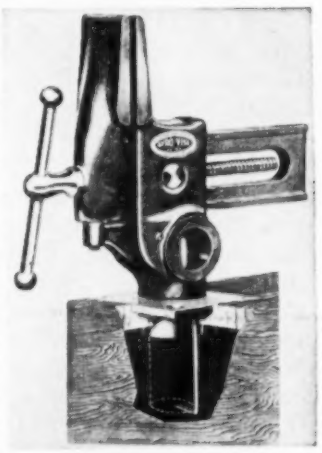
LIGHT & MEDIUM DUTY CASTERS
various wheel sizes, tread widths



Line of plate and stem casters in the light and medium duty range is available with 2½, 3, 4 and 5-in. wheels. Tread widths are ¾, 1 and 1¼ in. Casters conform to industry standards for use on industrial, commercial and institutional portable equipment. Made by **Gleason Corp.,** Dept. N, 6515 W. State St., Milwaukee, Wis.

▲ For more details circle **NED-272 E5** on enclosed inquiry slip ▲

FLUSH VISE BASE
drops level with work surface



By loosening a set screw on side of the Gyro-Vise flush base, post drops down level with work surface. Base is designed for applications where it is desirable to keep the work bench or other surface free of obstacles at times when the vise is not needed. Retaining rod holds post in place. Base increases utility of Gyro-Vises which operate from and rotate around the base, standing upright or laying flat on either side. Vise locks automatically in any desired position when jaws are tightening. Made by **Columbian Vise & Mfg. Co.,** 9023 Bessemer Ave., Cleveland 4, O.

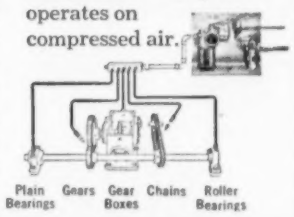
▲ For more details circle **NED-273 E5** on enclosed inquiry slip ▲

A SIMPLE CONCEPT IN LUBRICATION . . .

protects any machine . . . any bearing surface!

ALEMITE OIL-MIST

Proved in countless applications, Alemite Oil-Mist multiplies bearing life – slashes product spoilage–boosts machine output. Three types of fittings apply oil in form of mist, spray or liquid as needed for any bearing type, slides, vees, chains, gears. Completely automatic – fool-proof – operates on compressed air.

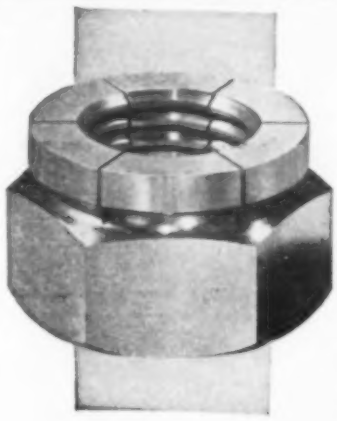


Alemite Oil-Mist offers all these advantages
Automatic lubrication • Continuous lubrication • Eliminates Guesswork
Greater safety • Cuts oil consumption up to 90%
Extends bearing life • Stops oil drippage • Saves man-power
Reduces number of lubricants needed • Eliminates "down-time"

FREE! Write for free catalog and data on Oil-Mist!
Alemite, Dept. L-55
1850 Diversey Parkway, Chicago 14, Illinois

ALEMITE

▲ For more details circle **NED-274 E5** on enclosed inquiry slip ▲



specify standard FLEXLOC

SELF-LOCKING NUTS

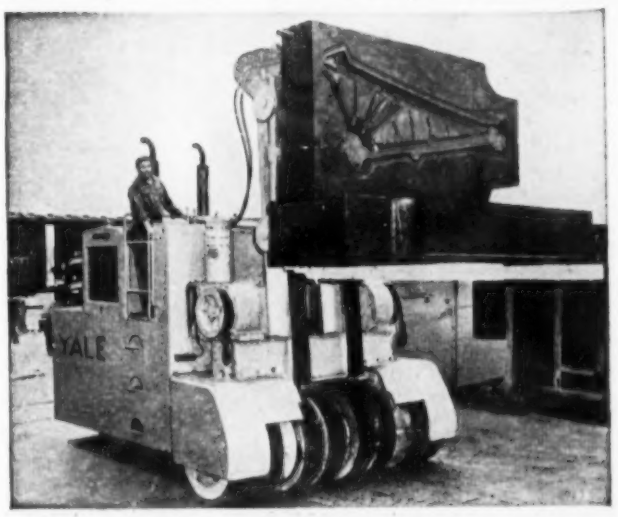
FLEXLOC	one-piece, all-metal construction	lock and stop nut in one
DESIGN	resilient locking segments	every thread carries its full share of load
FEATURES	controlled locking torques	

DO YOU KNOW? Because they have resilient locking segments, FLEXLOCS can be used effectively on bolts of varying diameter tolerances. The resilient segments accommodate themselves to the diameter of the bolt. And FLEXLOCS are stocked in a full range of sizes from #4 to 2" by authorized industrial distributors. Write for Bulletin 866. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-275 E5** on enclosed inquiry slip ▲

Roll up maximum tire performance



with Goodyear Job-Fitted Industrial Tires

WHAT quality do you want most when you order industrial tires? Longer life? Less "down-time"? Rapid dealer service on replacement and repairs? You get *all 3* with Goodyear Industrial Tires. They're job-fitted by tread design, compound and size to give peak satisfaction under various operating conditions. And Goodyear dealers are known far and wide for their ability to fill an order quickly. Why not call *your* Goodyear dealer and get the full story today?

FREE Technical Engineering Advice and Service

To help you solve tough Industrial Tire problems, Goodyear maintains a staff of fully qualified technical experts. For their free recommendations, write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Look for this sign; there's a Goodyear dealer near you. GOODYEAR TIRES

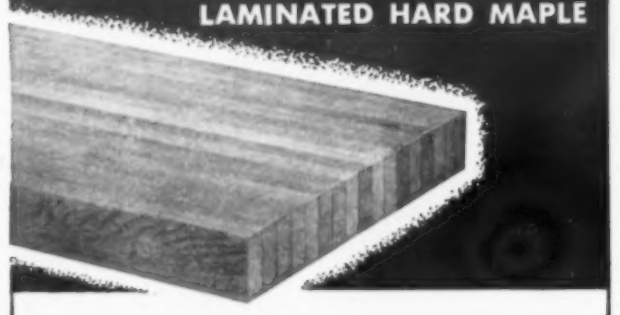
USE THE RIGHT TIRE FOR THE JOB—USE

GOODYEAR
INDUSTRIAL TIRES
All-Service, All-Weather, Xtra Cushion—T. M.'s
The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle **NED-276 E5** on enclosed inquiry slip ▲

BENCH TOPS

LAMINATED HARD MAPLE



Tolco bench tops are the first choice of the country's leading industries. They are "industry proven" for assembly benches, laboratory tables, cutting tables, workbenches and packing tables. Select pieces of ¾" Northern, hard maple laminations are electronically glued into a solid maple top. No soft wood cores—will not chip—easy and inexpensive to refinish. Full range of sizes. Sold by better distributors everywhere.

WRITE FOR NEW TECHNICAL LEAFLET AND PRICES.

THE TOLERTON COMPANY

P. O. BOX K658 • ALLIANCE, OHIO

ESTABLISHED 1894

▲ For more details circle **NED-277 E5** on enclosed inquiry slip ▲

Save up to $500

ON YOUR NEXT GAS FORK TRUCK

Priced about 25% under any other gas trucks in the popular 4000 lb. capacity, the Yardloader now brings cost-saving fork truck operation within the reach of practically every company with yard-handling problems. Travel speed approaching 14 miles per hour, large pneumatic tires, exceptionally high ground clearance and oscillating trail axle make it the ideal truck for outdoor service over large unimproved or semi-improved areas.

Heavy-duty industrial engine of proven make, 4-speed transmission and extra-heavy drive axle assure ample power for top performance under any conditions. Hydraulic lift to 122 inches, automotive-type steer, convenient controls and excellent driver visibility are a few of the features contributing to safety and ease of operation.

Get all the facts—and save up to $500.00 on your next gas fork truck. Write to The Baker-Raulang Company, 1239 West 80th Street, Cleveland 2, Ohio.

BAKER

"Yardloader"

TRADE-MARK 56Y6

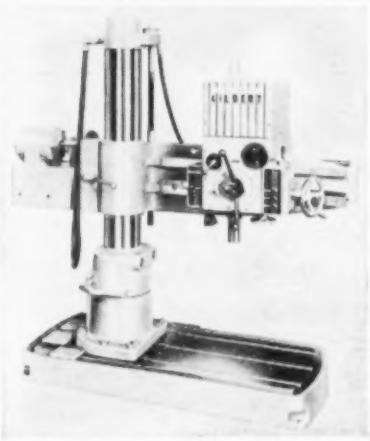
▲ For more details circle **NED-278 E5** on enclosed inquiry slip ▲

METAL-CUTTING SNIPS
handles have plastic grips

Use of Hungerford vinyl grips on improved Wiss Metal Master compound - action metal - cutting snips effects ample leverage and maximum gripping comfort, as well as offering color identification. Grips are resistant to oil and gasoline and will not discolor hands or clothing. They are molded to conform to tool handle contours and shaped with a finger stop at the outer edge for leverage. Snips are made from high carbon alloy tool steels in four models: M-1 for intricate design, with cutting direction to the left (illustrated); M-2, for same applications, with cutting direction to right; M-3 for straight cutting shallow arcs and pivots; and M-5 for notching, nibbling and cutting shallow arcs in sheet metal as heavy as 16 gage. Made by **J. Wiss & Sons Co.,** 33 Littleton Ave., Newark 7, N. J.

▲ For more details circle **NED-279 E5** on enclosed inquiry slip ▲

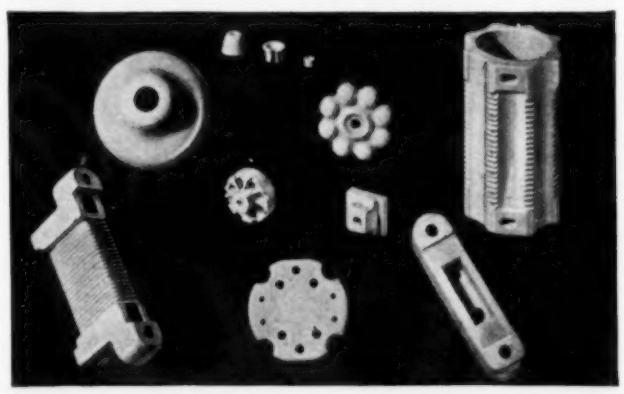
RADIAL DRILLING MACHINE
3-hp unit provides speed ranges of 40-1600, 50-2000 and 80-3200 rpm



Spindle speed ranges of 40-1600, 50-2000 and 80-3200 rpm are provided by this 3-hp light duty radial drilling machine. Sliding hardened alloy gears mounted on ground integral multiple splined shafts provide 12 geared spindle speed changes. Machine is equipped with an automatic reverse to spindle, and spindle and spindle sleeve are counterbalanced by adjustable spring mechanism. Head mounted on arm on two dove-tail slides is carried on adjustable ball bearing rollers which operate on hardened and ground way.

Feed mechanism affords 0.003, 0.007, 0.011 and 0.015-in. feeds per revolution. As safety feature, it is impossible to raise or lower arm while it is clamped. Arm movement stops automatically when it reaches either top or bottom of column, also if any part of head or arm should hit an obstruction during lowering. Runway or rail mounting bases can be provided. Machine is built with 3 or 4-ft arms and 9-in. column. Made by **Cincinnati Gilbert Machine Tool Co.,** Dept. N, Cincinnati 23, O.

▲ For more details circle **NED-280 E5** on enclosed inquiry slip ▲



here's the answer to a **better** product!

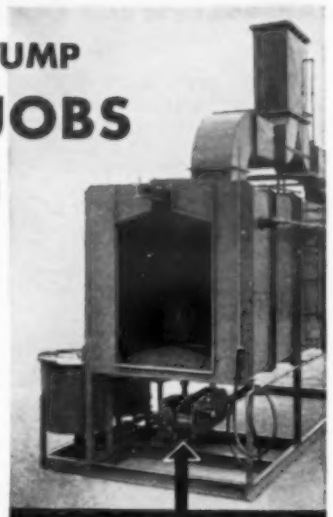
If your product consists of parts that call for unusual physical, electrical and mechanical properties either **singly** or in **combination,** you'll find no material better suited than Star VITROLAIN . . . a versatile electrical porcelain. This basic material is a feldspathic type ceramic having **superior** dielectric and mechanical strength. Its pore volume and moisture absorption factors are extremely low (less than 0.25%). It is ideal for parts used in the presence of moisture or chemical vapors. And, it's available in white as well as a variety of color glazes. Want more information? This helpful Star catalog describes the complete line of Star products and our modern fabricating facilities. Write for a copy **today.**

Star Porcelain Company,
50 Muirhead Avenue, Trenton 9. New Jersey.

STAR
porcelain company

▲ For more details circle **NED-281 E5** on enclosed inquiry slip ▲

ONE VIKING PUMP
DOES 3 JOBS
on Erikson Flow Coating Paint Booth



Viking pumps used on the flow coat machines built by Erikson Mfg. Co. of El Monte, California serve a multi-purpose. Due to the reversing feature of Vikings, a single pump is used to supply paint to the machine and, when reversed, is a fast cleaning pump.

Another outstanding feature of this Viking pump is the variable speed and capacity change. This readily permits regulating r te of flow for painting different size parts.

Whatever your pumping problem for handling thick or thin liquids, ask Viking for the answer. Start today. Ask for folder 55Sg.

VIKING PUMP COMPANY

Cedar Falls, Iowa

See our catalog in SWEETS

▲ For more details circle **NED-282 E5** on enclosed inquiry slip ▲

Adopt *CAMROL* CAM FOLLOWERS

This bearing is built especially to use the full advantages of CAMROL Cam Followers in a yoke mounting. The stud of the famous CF series bearing is replaced by an inner race that permits mounting in a yoke when desirable. Use these CYR series bearings or standard CF series cam followers for precision bearing performance in cam action or guide and support roller applications. Roller diameter sizes range from ¾" to 4".

Send for McGILL Catalog No. 52.

50th McGILL Anniversary

YOU CAN DEPEND ON **McGILL** QUALITY

McGILL MANUFACTURING CO., INC. 101 N. Lafayette St. Valparaiso, Indiana

▲ For more details circle **NED-283 E5** on enclosed inquiry slip ▲

EVERY ENGINEER
will want a copy of this BULLETIN

WRITE FOR BULLETIN 113. Complete details and mounting dimensions on Hannifin Series "H" Square Type Hydraulic Cylinders—2,000 p.s.i. (3,000 p.s.i., non-shock) maximum pressure. This is the cylinder with the new, externally removable cartridge gland...the biggest improvement in cylinder design in the last 50 years. A complete line! 9 bore sizes from 1½" to 8"...13 standard mountings, many combinations. Steel heads. Steel cylinder bodies, "TRU-BORED" and honed. Piston rods ground, polished and hard chrome plated. Send for Bulletin 113. It's an easy, convenient catalog for use in layout work.

HANNIFIN

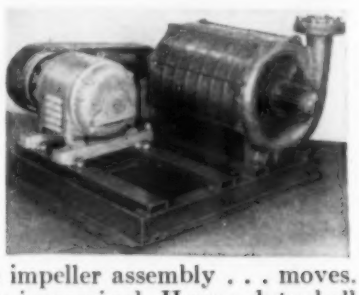
Hannifin Corporation, 527 South Wolf Road, Des Plaines, Ill.

Air and Hydraulic Cylinders • Presses • Air Control Valves

▲ For more details circle **NED-284 E5** on enclosed inquiry slip ▲

LAMSOM BILLMYRE
offers centrifugal blowers in cast iron or heavy steel

Lamson Billmyre Centrifugal Blowers are encased in heavy steel or ¼" cast iron housing. Designed for air or gas, they range from 100 to 25,000 C.F.M. . . . from ½ to 500 hp.



Only 1 part . . . the impeller assembly . . . moves. No internal lubrication is required. Heavy duty ball bearings of standard manufacture need lubrication at most 4 times yearly. Are mounted on accessible, open-type brackets outside the housing.

Air is clean, oil-free. Delivered without pulsation. Pressure or vacuum remains nearly constant at all capacities . . . with horsepower proportional to actual air volume delivered.

Lamson Billmyre Centrifugal Blowers are assembled from parts made by Lamson. Delivery is rapid.

For further information on Lamson Billmyre Air Blowers, Exhausters, and Gas Boosters, write today for bulletin B-6 to Lamson Corporation, 2025 Lamson Street, Syracuse 1, N. Y. *Advt.*

▲ For more details circle **NED-285 E5** on enclosed inquiry slip ▲

NEW STEAM CLEANER
...fast, thorough, versatile, at
EXCITING LOW COST

ONLY **$379** COMPLETE F.O.B. FACTORY

VAPOR **UPGRADER JUNIOR** HYDRAULIC STEAM CLEANER

Clean better and faster with the low-cost Vapor Upgrader Junior. Develops up to 140 p.s.i. pressure; steam in 70 seconds. One-man operation—cuts labor costs. Portable on easy-rolling wheels. Used indoors or out.

Dissolves and flushes away all kinds of dirt, grease, and grime. Cleans air filters, motors, tractors, machinery, rolling stock, buildings. Let us show you what "Junior" can do!

Send for NEW Bulletin 594

VAPOR HEATING CORPORATION
80 E. Jackson Blvd., Chicago 4, Ill.
In Canada: Vapor Car Heating Co. of Canada, Ltd., 65 Dalhousie St., Montreal 3

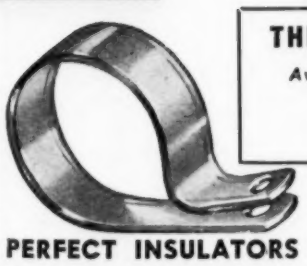
▲ For more details circle **NED-286 E5** on enclosed inquiry slip ▲

PLASTIC CLAMPS

Hi TRADE MARK REG

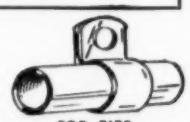
THE COMPLETE LINE!
Available in . . .
- Ethyl Cellulose
- Nylon and Saran

Millions in Use!



PERFECT INSULATORS

Available in size range from ⅛" to 3"—in 46 stock items. Open easily—slide over wires, cables, pipes, tubes, etc. Light in weight, tough and durable over wide temperature range. Non-corroding—non-sweating. Rounded edge prevents cutting.


FOR PIPE

FOR GROUP WIRE

FOR SINGLE WIRE

Now! Hi PLASTIC STRAPS

Available in two sizes for non-metallic cable . . . your choice of black or ivory color in both sizes. Rust and corrosion resistant—no insulation cutting—greater safety. Complies with REA. New ivory color perfect for NMC—UF cable

WRITE FOR FREE SAMPLE PACKET

HOLUB INDUSTRIES, INC.
449 ELM ST • SYCAMORE, ILLINOIS

▲ For more details circle **NED-287 E5** on enclosed inquiry slip ▲

TWO-WAY HAND TRUCK
travels sideways and forward

Wheel shift lever on the Directo-Truck, a two-wheeled hand truck, changes wheels from conventional position for forward travel to a right angle position for sideways travel. By locking the wheels into this position wide or long loads such as boxes, pipe, lumber or steel, can pass through relatively narrow doors or down narrow aisles. Connection of two accessory wheels converts truck into a four-wheeled model. Load capacity is 750 lb. It is built of ¾-in. steel pipe braced with steel plate and has 6-in. Texite roller bearing wheels. Larger wheels are optional. Overall dimensions are 22 x 47 in. and weight is 56 lb. Made by **Directo-Truck Co.**, P. O. Box 266-N5, Canfield, O.

▲ For more details circle **NED-288 E5** on enclosed inquiry slip ▲

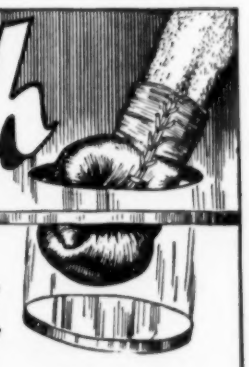
DESK TOP MICROFILMER
affords three microfilming methods and choice of three reduction ratios

Economical microfilming of wide variety of business documents, from file cards to large ledger forms is made possible by choice of three reduction ratios in this Recordak Reliant microfilmer. Lenses can be interchanged to provide 40:1, 32:1 and 24:1 reductions. Three methods of microfilming provided by unit are the Duplex method, in which fronts and backs of documents are photographed simultaneously side-by-side on film; the Duo method, in which fronts of documents are photographed down one-half of film width, then up the other half; and the Standard method, in which fronts of documents are photographed across full film width.

Up to 29,000 small items such as reference cards and bank checks can be recorded on 100-ft roll of 16mm film. Automatic feeder affords speeds of over 400 items a minute. Film unit will accept two rolls of film, automatically duplicating on second roll every document photographed. Unit will accept documents up to 12 in. wide, recording 11 in. of printed matter on the film. Length of document is unlimited. An endorser-canceler is offered as an accessory. Made by **Recordak Corp.**, 444 Madison Ave., New York 22, N. Y.

▲ For more details circle **NED-289 E5** on enclosed inquiry slip ▲

Punch with a PACIFIC



Mathews Conveyor Co.
says -

"Our 300 ton Pacific Hydraulic Press Brake has been in operation for three years. We like it for its flexibility and because it has been trouble free. As an example, we gang-punch up to forty 7/16" hex-holes in 3/16" channel – and also a 1⅛" hex-hole in 1" steel plate. We recommend the "PACIFIC" highly to other shops."

PACIFIC INDUSTRIAL MFG. CO.
848-49TH AVENUE • OAKLAND, CALIF.

▲ For more details circle **NED-290 E5** on enclosed inquiry slip ▲

KODAK SIGNET 35 CAMERA—the ideal 35mm. camera for most photographic needs.

Easy-to-use camera for hard-working pictures

You'll find it easier to train . . . to demonstrate . . . to illustrate technical talks . . . and do countless other important jobs with 35mm. slides and prints. Job setups, breakage claims, safety hazards, research results, maintenance data—all can be photographed for study, circulation, and reference. And with a camera small enough to slip into your pocket for use as you walk through the plant.

The Kodak Signet 35 Camera has all the advanced features you need for taking quality industrial photographs. Yet it's as compact and easy to operate as your family snapshot camera. A coupled rangefinder takes the guesswork out of focusing—three simple settings with handy finger-tip controls make accurate operation a snap. Sensibly priced at $87.50, including Fed. Tax.*

WRITE FOR FREE BOOKLET on Kodak Signet 35 Camera.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

**Price quoted is subject to change without notice.*

▲ For more details circle **NED-291 E5** on enclosed inquiry slip ▲

chip-tote®

Here's a way to cut production costs! The Chip-Tote gives you "hands-off" continuous removal of chips, turnings and borings from high production tools. Automatic machine tools can run continuously without shut-down for scrap removal. Chip-Totes available to fit all standard multiple spindle or automatic machine tools. Write today for catalog No. MF-640 and see the advantages available.

scrap handling

hinged steel belting

Here's a continuous belt conveyor made-up of heavy gauge steel links that are joined by high carbon steel rods. A May-Fran hinged steel belt will gather the turnings and borings from a battery of Chip-Totes or you can use the belt to handle hot, heavy or abrasive castings, forgings, metal blanks, or formed metal parts through production. Write today for No. MF-530 and get full details.

5002-MF

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.
1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle **NED-292 E5** on enclosed inquiry slip ▲

THE HI-GAIN Industrial POCKETSCOPE ®BY WATERMAN

MODEL S-14-A

Identified by its hi-sensitivity and incredible portability, S-14-A POCKETSCOPE now permits "on-the-spot" control, calibration and investigation of industrial electronic, medical and communications equipment. Direct coupling without peaking, used in the identical vertical and horizontal amplifiers, eliminates undesirable phase shifting. Designed for the engineer and constructed for rough handling.

Wt. 12¾ lbs. 12" x 5¾" x 7"

Vertical and horizontal channels: 10mv rms/inch, with response within—2DB from DC to 200KC and pulse rise of 1.8 μs. Non-frequency discriminating attenuators and gain controls with internal calibration of trace amplitude. Repetitive or trigger time base, with linearization from ½cps to 50KC with ± sync. or trigger. Trace expansion. Filter graph screen. Mu metal shield. And a host of other features.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.
CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE.

S-4-A	SAR	PULSESCOPE
S-5-A	LAB	PULSESCOPE
S-10-B	GENERAL	POCKETSCOPE
S-11-A	INDUSTRIAL	POCKETSCOPE
S-14-B	WIDE BAND	POCKETSCOPE
S-15-A	TWIN TUBE	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

▲ For more details circle NED-293 E5 on enclosed inquiry slip ▲

PENETROL saves PITTSBURGH STEEL CO. 1¼ mile steel trestle from destruction under excessive corrosive conditions!

AIR-DRYING OIL

THE FLOOD COMPANY HUDSON, OHIO

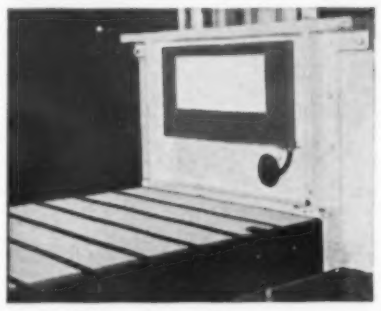
1¼ miles of steel trestle . . . carrying endless strings of cars loaded with freshly-quenched granulated slag, that drip chemical and acid contaminated water on the structure continually . . .

yet it is safe and strong, in every joint and surface, because it's PENETROL protected!

Here's what Jack Moreland, Supervisor of Painting, Pittsburgh Steel Co., Monessen, Pa., says: "This was a tough condition in 1941. We were becoming aware of the fact that thousands of joints and the large areas of flat surfaces in this trestle, were being subjected to rust and corrosion from many different sources. PENETROL was slushed into all joints and also applied to other pitted and rusted areas, during the time the surfaces were being cleaned for painting. The whole structure was given two coats of paint, each fortified with PENETROL. In 1947, the joints were okay . . . did not need special treatment . . . and we repainted the entire structure with paint to which we had added the protective qualities of PENETROL. In 1955, the joints and general structure still are in good condition, thanks to PENETROL!" Ever since this outstanding performance, the Pittsburgh Steel Company Monessen Mill has used the PENETROL system of protection on all its steel structures. Ask us about this time-proved method and let us help solve your rust and corrosion problems.

▲ For more details circle NED-294 E5 on enclosed inquiry slip ▲

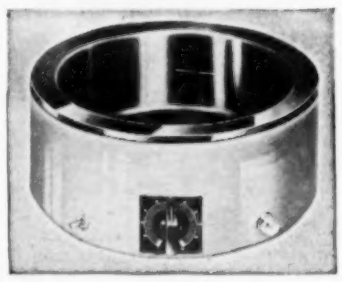
MACHINE LIGHTING
improves punch press production



Maximum safety for operators, increased production, minimum of rejects and protection of dies from damage are potential advantages of Presslite improved punch press bed lighting. System is adaptable to existing machines and is installed easily with accessory track mounting. Shatterproof Plexiglas, with either horizontal or vertical louvers, minimizes glare, protects lamps and assures full light output. Presslite is a four-lamp unit which is sealed with a neoprene gasket. No. PL 415 measures 2¼ x 12¼ x 19¼ in. with four 15-w lamps, and No. PL 420 is 2¼ x 12¼ x 25¼ in. with four 20-w lamps. Made by **Sun-Lite Mfg. Co.**, Dept. PL-420, 2555 Bellevue Ave., Detroit, Mich.

▲ For more details circle NED-295 E5 on enclosed inquiry slip ▲

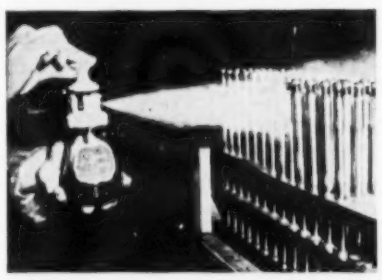
CONSTANT TEMPERATURE BATH
thermostat controls heat to 160° F



Suitable for various laboratory uses, this small portable constant temperature bath has an anodized aluminum interior chamber and thermostat control up to 160° F. Bath is 3 in. deep and has 8½-in. diameter, with glass wool insulation throughout. It is equipped with a line switch and neon pilot light. Made by **Labline, Inc.**, 219 N. Desplaines St., Chicago 6, Ill.

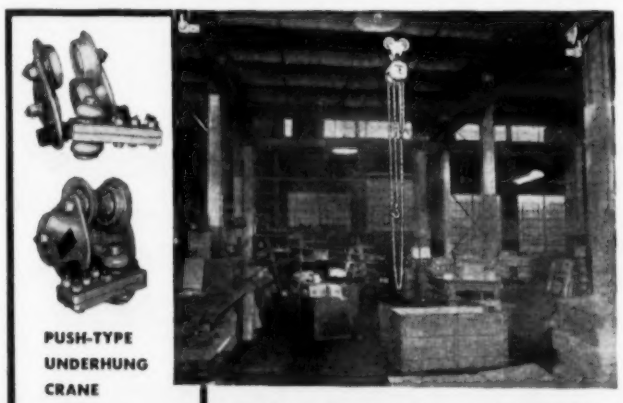
▲ For more details circle NED-296 E5 on enclosed inquiry slip ▲

HAND-OPERATED SPRAYER
discharges for 6 to 8-ft distance



Effective means of coating parts in process with a uniform layer of rust preventive oils or cleaning fluids is possible with the Merry Mister hand-operated sprayer. It develops its own hydraulic pressure from fluid being sprayed. Superfine mist is discharged for a distance of 6 to 8 ft in one stroke. Self-cleaning, self-sealing nozzle can be used for spraying any thin liquid. Made by **N. F. C. Engineering Co.**, 2939 Sixth Ave. N., Anoka, Minn.

▲ For more details circle NED-297 E5 on enclosed inquiry slip ▲



BUILD IT FAST . . . YOURSELF!

First, buy this low-cost 'Budgit' No. 64 Crane Assembly from your "Shaw-Box" Distributor. For the crane's bridge and tracks, get 6" to 12" I-Beams locally. You can build the bridge (maximum span—25 feet) in a couple of hours. Just drill a few holes, then mount the wheel carriages to bridge beam and tracks. Economical 'Budgit' I-Beam Trolley and Aluminum Chain Block—¼ to 1-ton capacities . . . Recommended for easy-lifting, smooth-traveling crane service. Write for Bulletin 413.

'Budgit'® SINGLE CARRIAGE CRANE ASSEMBLY

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of "Shaw-Box" and 'Load Lifter' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, 'American' and 'American-Microsen' Industrial Instruments, and Aircraft Products.

▲ For more details circle NED-298 E5 on enclosed inquiry slip ▲

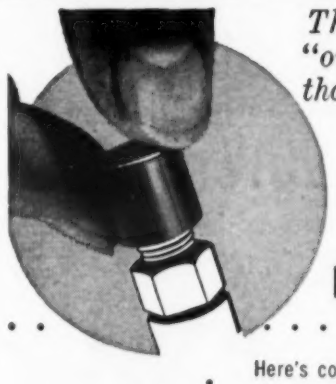
44 WAYS BETTER

A great new line of Toledos! *44 new features* are now added to the traditional accuracy and dependability of Toledo Scales. Complete range of types and capacities. Get your scale information up-to-date . . . write today for the new condensed catalog No. 2001. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO®
HEADQUARTERS FOR SCALES

Model 2181—New version of the world's most widely used portable dial scale.

▲ For more details circle NED-299 E5 on enclosed inquiry slip ▲



That vital "ounce of protection" that pays . . .
BIG DIVIDENDS

Silbiten Plastic Shipping PLUGS and CAPS

Low-cost protection against-
- Dirt, dust and moisture
- Thread damage
- Loss of liquids

Here's convenient, inexpensive protection against handling and shipping damage. Used to cover threaded openings and connections, these protective plastic plugs and caps repay their low cost many times over by eliminating unnecessary service and repair work and by reducing customer complaints. They're available for immediate delivery in a wide range of sizes in both threaded and plain types.

Bulletins P-5312 and P-5203 have full details. Write for copies. Dept. 7P

C-2

THE Silbiten PLASTICS DIVISION
DENTAL MFG. CO. 10 East 40th Street New York 16, N.Y.
Western District Office • Times Building, Long Beach, California

▲ For more details circle NED-300 E5 on enclosed inquiry slip ▲

The New CLEARVIEW NAMEPLATE PRESS

EASY TO OPERATE • COMPACT • DURABLE

Here at last is a new low-priced Nameplate Press that will pay for itself quickly and many times over.

Now you can stamp neat, perfectly aligned letters and figures on all types of identification plates with this new, easy-to-operate Nameplate Press: MACHINERY DETAIL PLATES KEYS — TAGS — CHECKS IDENTIFICATION PANELS and scores of other identification purposes.

ELIMINATES OBSOLETE STAMPING BY HAND

- Stamps Neat Uniform Characters
- Fully Automatic Letter Spacing
- High Quality Hardened Steel Dial
- Interchangeable Dial Adjustment
- Accommodates Plates up to 4" x 8"
- Prevents Irregular Alignment—Spacing—Depth

FULLY GUARANTEED

Write, call or wire today for complete information and price.

PERMANENT IDENTIFICATION—It is often hard to keep tab on various pieces of equipment because of inadequate or temporary methods of identification marking. A solution to this dilemma may be the metal stamping machine illustrated.

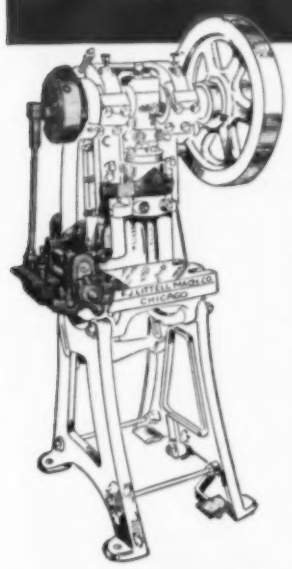
The CLEARVIEW Company
215 EAST SECOND STREET NEW YORK, N. Y.

▲ For more details circle NED-301 E5 on enclosed inquiry slip ▲

Automation in Action . . .

LITTELL Style "M" ROLL FEED

Makes Any Punch Press Fully Automatic— and 3 Ways Better



- **FASTER** . . . 9,000 stampings an hour at 200 strokes per minute, or 4500 stampings an hour at 100 strokes per minute are easy production rates on any press with Style "M" Roll Feed.
- **SAFER** . . . Automatic feeding with Style "M" Roll Feed keeps hands and fingers safe from costly accidents.
- **LOWER IN COST** . . . Faster, automatic production from low cost coil stock cuts cost per stamping. Greater safety gives your presses the lowest insurance rate.

The Style "M" Roll Feed is quickly and easily installed on any standard punch press. Several models are available—the largest feeds coil stock up to 8" wide and .055" thick. All models feed left to right, right to left or front to back. Feed direction is reversed by reversing the clutch. On large models, feed length per stroke is from 0 to 4⅜" with standard gears, and from 0 to 8½" with compound gears. Feeding rolls are hardened and ground for long service life. Style "M" puts automation in your press room at lowest possible cost.

Write for the Littell Roll Feed Catalog

F. J. LITTELL MACHINE CO. — *Speed with Safety*

ROLL FEEDS • DIAL FEEDS
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle **NED-302 E5** on enclosed inquiry slip ▲

"NO-CHANGE" DIE HEAD CUTS SETUP TIME!

Send today for this fully illustrated 8-page booklet on Oster "Rapiduction" Pipe Machines.

It contains detailed information on these modern high-production machine tools . . . closeup views of fully explained design features . . . data on standard and extra equipment . . . time studies . . . and complete specifications on these machines.

THE OSTER MANUFACTURING CO.

Main Office and Factory: 2066 E. 61st St., Cleveland 3, Ohio

New York Factory Branch Sales and Service, 25-36 Jackson Ave., Long Island City 1, N. Y.

BUILDERS OF COST-REDUCING THREADING EQUIPMENT SINCE 1893

▲ For more details circle **NED-303 E5** on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

▲ For more details circle **NED-304 E5** on enclosed inquiry slip ▲

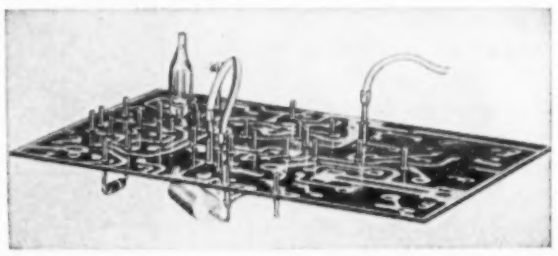
AIR FILTER GAGE
checks pressure differential

Continuous, accurate monitoring of the dust removal efficiency of air filters is provided by this air filter gage. When the differential pressure across the filter becomes excessive because of dirt accumulation, a signal vane behind the dome-shaped window of the gage flips into view to display the words "Renew Filter" on a bright orange background. This signal remains visible until the gage is reset after the filter has been cleaned or renewed. It can be adjusted to operate on any differential between 0.06 and 3.5 in. of water. Built-in switch will operate a signal light or alarm which can be remotely located. Built-in calculator permits setting the gage on the job to actuate signal automatically when the pressure across the filter has increased to twice the pressure differential of the clean filter. Made by **Bacharach Industrial Instrument Co.**, 7303 Penn Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-305 E5** on enclosed inquiry slip ▲

TERMINALS & CONTACTS
miniature type for printed circuits available for automatic feeding

Wiring time and assembly costs can be reduced and production increased through use of miniature tubular pins and female contacts. The self-retaining ter-



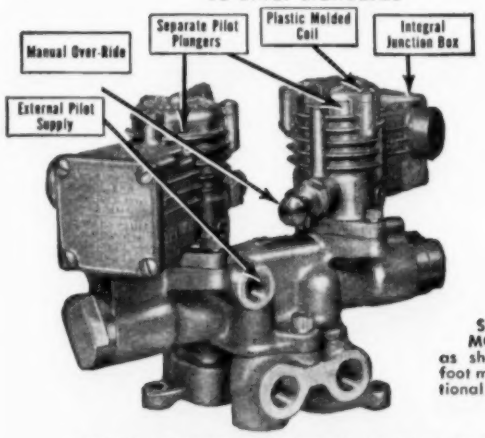
minals are adaptable for printed circuits. Locking action of the tubular pin retains it in position until additional components are added and until it is permanently soldered. Resistor, capacitor, condenser and neon pigtails can be fed into the terminal at top or bottom of panel and held in place until soldered.

External leads from other components can be wrapped around pin terminals and spot soldered. Female contact is for use where quick-connect and disconnect type connections are desired. Both pin and contact can be supplied in chain form for automatic feeding and crimping operations. An automatic inserting machine is available for feeding from 1 to 40 pins simultaneously into printed circuit boards. Made by **Malco Tool & Mfg. Co.**, Dept. NDC, 4025 W. Lake St., Chicago 24, Ill.

▲ For more details circle **NED-306 E5** on enclosed inquiry slip ▲

New SPEED KING
CONTROL VALVE with DOUBLE SOLENOID

Designed and Built To J.I.C. Standards



SUB-BASE MOUNTING as shown here or foot mounting. (Optional feature)

CHECK THESE FEATURES LISTED BELOW

1. LIFE — Performs through millions of cycles without danger of breakdown or coil burn-out.
2. SPEED — Up to 600 cycles per minute for air service.
3. EXTERNAL PILOT SUPPLY — Standard feature for optional use. Used for vacuum — low pressure air and hydraulics to 300 p.s.i.
4. MANUAL OVER-RIDE — (Optional feature) Enables valve to operate without current.
5. SEPARATE PILOT PLUNGERS — For use in actuating in either direction — momentary electrical contact to change valve position.
6. PLASTIC MOLDED COIL — Prevents short circuiting.
7. INTEGRAL JUNCTION BOX — (Optional feature) Has removable cover for ease of wire installation and maintenance.

ASK FOR BULLETIN A12

Valvair 947 BEARDSLEY AVE. • AKRON 11, OHIO
Affiliate: Sinclair-Collins Valve Company

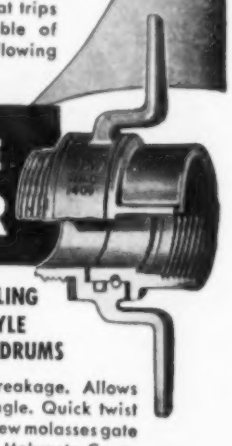
▲ For more details circle **NED-307 E5** on enclosed inquiry slip ▲

OPW AUTOMATIC BARREL FILLER

QUICK FILL . . . NO OVERFLOW

Complete automatic shut-off at any point of adjustment. Controlled fill level. Liquid actuates float that trips automatic mechanism. Capable of handling light or heavy flowing liquid even to gas tar.

OPW MOLYGATE DRUM COUPLER

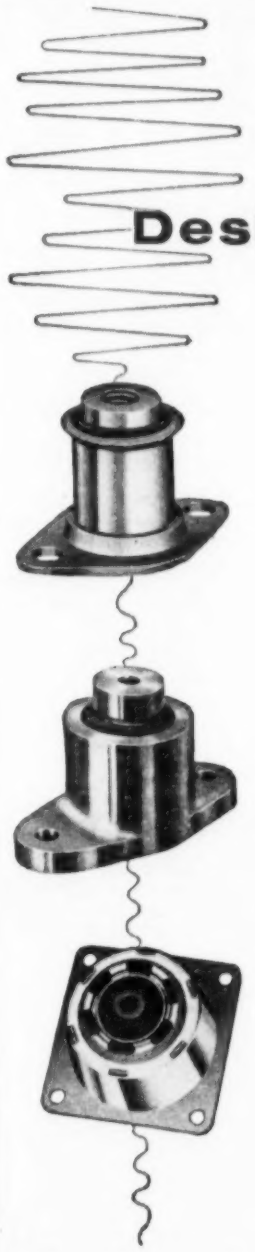


FOR QUICK COUPLING OF MOLASSES STYLE GATE VALVES TO DRUMS

Saves time and breakage. Allows discharge at any angle. Quick twist disconnects. Just screw molasses gate valve or faucet into Molygate Coupler. Eliminates wrenching, pounding and stripped threads.

OPW CORPORATION
2729 Colerain Ave. Cincinnati 25, Ohio

▲ For more details circle **NED-308 E5** on enclosed inquiry slip ▲



FREE
Design Data on Vibration Control!

There's a wealth of practical help for designers in this General Tire catalog on Silentbloc vibration mounts. It features a selection method to cover vibration control on equipment ranging from tiny business machines to giant punch presses. Why not look into it for your own vibration problem?

Write to The General Tire & Rubber Company, Industrial Products Division, Dept. A-2, Wabash, Indiana. Ask for catalog 4240.

PERFORMANCE CURVES!
SELECTION CHARTS!
CHARACTERISTIC TABLES!

"From Plans to Products in Plastics and Rubber"

THE GENERAL TIRE — *Industrial Products Division* — WABASH INDIANA

These are General Tire Industrial Products now serving industry

Silentbloc vibration and shock mountings • Silentbloc bushings • Silentbloc bearings • Oil & hydraulic seals • Bonded to metal rubber parts • Hydraulic brake parts • Metal stampings • Extruded & molded rubber • Extruded plastic • Polyester glass laminates • Sponge rubber • Glass run channel • Vibrex® fastners

▲ For more details circle **NED-309 E5** on enclosed inquiry slip ▲

THE MODERN WAY

To do all kinds of tacking and fastening jobs.

SAVE TIME STEPS MATERIALS

HANSEN ONE HAND TACKERS and STAPLERS

1001 USES

- PLASTIC DIAL PLATES ON RADIOS
- LOUDSPEAKER SILKS
- GASKETS TO REFRIGERATOR DOORS
- RUBBER DIES ON PRINTING ROLLS
- CELLOPHANE OR GLASSINE
- ASBESTOS BAFFLES IN RADIOS
- TOPS AND TRIM ON AUTOS

FASTER PRODUCTION — quality tacking and fastening — easy portability — one-hand operation — handy Take-up Jaw for quick accessibility and on-the-job servicing — are features that make HANSEN the "preferred" TACKER.

36 MODELS—80 STAPLE SIZES

EXTENSIVELY USED in industry for all types of tacking, fastening, assembly — HANSEN saves TIME — STEPS — MATERIALS — with its efficient, rapid one-hand operation. SUBMIT YOUR PROBLEM. GIVE DETAILS.

For BEST RESULTS use only genuine Hansen Staples in the BLUE BOX . . .

A. L. HANSEN MFG. CO. Request Booklet ...TODAY

5164 RAVENSWOOD AVE., CHICAGO 40, ILL

For more details circle NED-310 E5 on enclosed inquiry slip

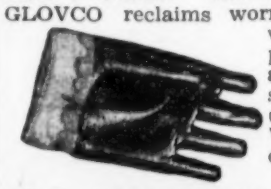
DON'T THROW AWAY WORN OUT PLASTIC COATED GLOVES

GLOVCO's "Over-Kote" plan of cleaning, repairing and recoating makes them safe and good as new at fraction of original cost.

This is a new service that will save money for you. Plants are saving 90% of the plastic-coated gloves they once threw away. We guarantee satisfaction.

DON'T SCRAP LEATHER OR FABRIC GLOVES!

GLOVCO reclaims worn, dirty leather-faced gloves, welders' gloves, mitts, hand pads. Also hot mill, terry cloth, asbestos aprons and gloves, sleeves, drop cloths, etc. Service used in thousands of plants. Write for details of FREE trial demonstration.



U.S. INDUSTRIAL GLOVE CORP.

9352 Roselawn Ave., Detroit 4, Mich.

For more details circle NED-311 E5 on enclosed inquiry slip

need many properties in one material?

When you need parts which must have many properties in combination, try *Synthane* laminated plastics. Many different grades of *Synthane* sheets, rods, tubes, and molded parts offer you light weight, dielectric strength, hardness, heat resistance, dimensional stability, chemical resistance, machinability, and many other needed properties, all in combination. Complete fabrication service too. Send coupon for catalog and get the full story.

SYNTHANE

SYNTHANE CORPORATION

N.E. River Road, Oaks, Pennsylvania

Please send me a copy of the *Synthane* catalog.

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

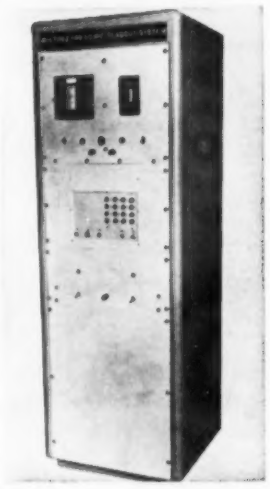
For more details circle NED-312 E5 on enclosed inquiry slip

WHITEPRINT COPIER produces up to 25 fpm

Prints of tracings, drawings, diagrams, charts, forms, letters and reports of any translucent original, regardless of whether drawn, typed, written, printed or photographed, can be produced at speeds up to 25 fpm by Peck & Harvey Speedmaster model 2500C whiteprint copier. It is a 2500 w, 44-in. width capacity machine which uses the dry ammonia vapor method of true-to-scale diazo reproduction. Both cut sheets and rolled stock can be handled in any length. Electronic drive provides quiet, instantaneous speed control, with a full stop and reversal switch for emergency return of originals. Storage compartments are provided for cut sheets and rolls. Available from **P & H Sales Corp.**, Dept. NED, 5640 N. Western Ave., Chicago 45, Ill.

For more details circle NED-313 E5 on enclosed inquiry slip

MULTIPLE PRESSURE READOUT measures up to 200 pressures at once and reads out all values in two min.



Simultaneous measurement of pressures, with rapid information presentation, is now made possible by single package-type multiple pressure readout system. Unit can measure up to 200 pressures at a given instant and readout digital values, accurate to 1 part in 2000, within 2 minutes of sensing time. Manifold pressures are measured by the Press-I-Cell unit featuring pressure capsules made from Ni-Span C, a differential transformer pick-up and a servo-positioned 200-in. film scale.

System consists of many pressure comparators, each of which receives one of the pressures to be measured on signal side of diaphragm. Readout is available on log sheets, punched tape, or for feeding into digital computer. Unit has extensive application in wind tunnels where many pressures of an air frame must be sensed, in petroleum tank storage for frequent inventories of tank contents and in automotive testing laboratories. Made by **Fischer & Porter Co.**, 356 Jacksonville Rd., Hatboro, Pa.

For more details circle NED-314 E5 on enclosed inquiry slip

LARGEST SELLING CUTTERS FOR TOUGH DIE SINKING

You'll find T-J Die Sinking Milling Cutters are top favorites in die and forge shops everywhere today—because they're *extra rugged* . . . produce more work between grinds! Designed for speed, accuracy and long life . . . hold a sharp edge longer . . . less breakage! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes . . . T-J dependability! Send for new catalog 4-153. The Tomkins-Johnson Co., Jackson, Mich.

T-J TOMKINS-JOHNSON

For more details circle NED-315 E5 on enclosed inquiry slip

New FLOORMOBILE keeps plants cleaner, safer and cuts costs!

Floormobile suction cleans 20M sq. ft. of floor per hour.

FLOORMOBILE is a powerful, mobile floor cleaner that sucks up dust, dirt, string, paper, trash and other materials . . . some impossible to pick up with other methods. The Plantman FLOORMOBILE suction cleans up to 20,000 sq. ft. an hour. It doesn't stir up and chase dust around as brooms or ordinary sweepers do. But on the contrary, it *sucks up* the dust and keeps it out of the air. Less airborne dust means fewer germ-laden dust particles and less absenteeism; less cleaning of fixtures, motors, wires, work in process and finished stocks; and less explosion and fire hazards.

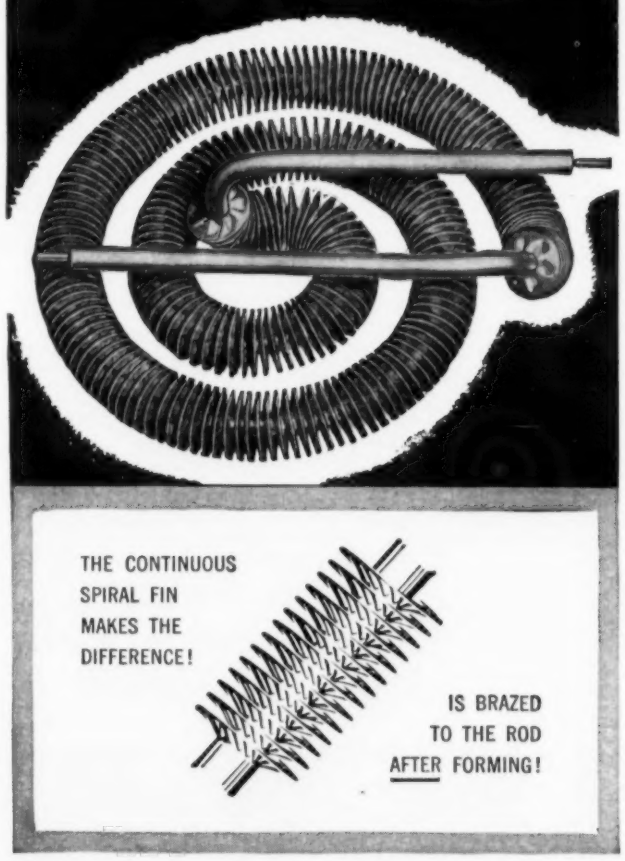
Reports from users show you can clean large floor areas faster, easier, better . . . *and control dust* . . . with the Plantman FLOORMOBILE. One company using 5 FLOORMOBILES reports direct labor savings in excess of $30,000 per year; another company has reduced man hours devoted to dust control by 72%; still another with 2 FLOORMOBILES cleans three floors in the time it formerly took three men to clean one floor.

Send today for brochure and complete information showing how Plantman FLOORMOBILE can keep your plant cleaner, safer and cut costs.

Write Handling Devices Co., Inc., 45 Pearl St., Brookline 46, Mass. —*Advt.*

For more details circle NED-316 E5 on enclosed inquiry slip

NEW FERROD "FINROD" HEATERS SAVE SPACE IN ELECTRICAL HEATING!



Ferrod Finrod Units are made from high-grade resistors embedded in refractory insulation inside a length of steel tubing, around which spirally wound steel fins are firmly brazed *after* forming.

This latter feature permits you to literally "do tricks" with a fin-type heater. You can give it almost any shape, and pack a lot of heat into small areas. You can also have from 4 to 11 fins per inch for heat dissipation.

Ferrod Finrod Heaters come in two types: HEAVY DUTY (.540" tubing with 1 5/16" dia. fins) for forced-air convection heating; SLIM-FIN (.312" tubing with 15/16" dia. fins) for all types of applications.

Write for catalog sheets giving sizes, wattages, other information.

FERROD **FERROD MFG. CO.**

607 N. River St., BATAVIA, ILLINOIS

Subsidiary Rexnord *Corporation*

For more details circle NED-317 E5 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO
SINCE 1927

▲ For more details circle **NED-318 E5** on enclosed inquiry slip ▲

Atlantic straight wheels

SAFER . . . because every Atlantic Straight Wheel 2" in diameter and larger is test-run at a minimum of 50% higher speed than its recommended operating speed . . . features special resinoid bonds capable of withstanding tremendous centrifugal forces.

FASTER . . . because Atlantic Wheels also feature a low-heat factor which permits fast, cool cutting and eliminates burning or discoloration under high speed operation.

LOWER COST, TOO! Atlantic Straight Wheels seldom have to be dressed . . . keep replacements at a minimum; operating costs at a new low. Prove it for yourself. Call your nearby Atlantic representative or write direct. Atlantic Abrasive Corp., 504 Pearl Street, South Braintree, Mass.

ATLANTIC ABRASIVE CORP.
South Braintree 86, Massachusetts

▲ For more details circle **NED-319 E5** on enclosed inquiry slip ▲

NEW JOHNSON MODEL "M" "MOBILE" BAND SAW

Capacity—5" rounds, 10" flats

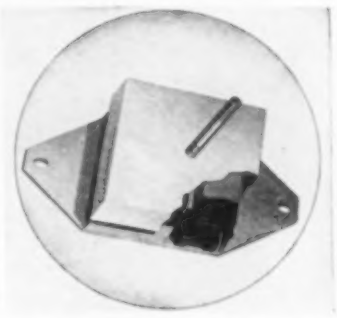
A Band Saw with PORTABILITY-PLUS . . . It's a natural for contractors of all kinds, or manufacturers, where it is advantageous to wheel the saw to the cutting job. It rolls easily over floors or even rough ground. Eliminates slow, laborious hand cutting of structural steel, pipes, conduits, angle iron, re-inforcing rods, etc. Carries its own extra blade supply. Modernize your facilities with one or more of these revolutionary machines now.

SEND FOR CATALOG AND NAME OF LOCAL DEALER

JOHNSON MANUFACTURING CORP.
BARNES and TAYLOR STS. ALBION, MICHIGAN

▲ For more details circle **NED-320 E5** on enclosed inquiry slip ▲

VIBRATION MOUNT in sizes to support ½ to 3800 lb



Problems of machinery vibration can be solved with Rexon mounts without mathematical calculating of dampening requirements. Unit consists of one or more X-shaped rubber elements encased in steel channels. Under normal loading, points of the X deflect enough to provide "floating" suspension. If overloaded, X-shaped elements merely become conventional compression mounts. Direction of vibration and weight each mount will bear are only information needed for intallation. Mounts are offered in sizes to support from ½ to 3800 lb. Element is neoprene to resist oils, grease, moisture and cleaning solvents. Made by **Hamilton Kent Mfg. Co.**, 425 W. Grant St., Kent, O.

▲ For more details circle **NED-321 E5** on enclosed inquiry slip ▲

VACUUM FORMING MACHINE clamp frame adjustable to heights up to 24 in. above molding table

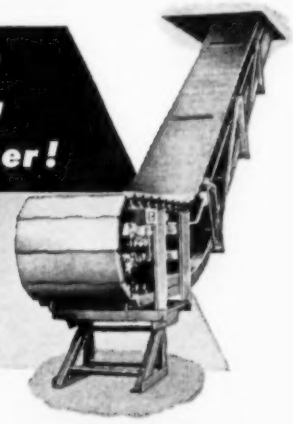
Among innovations incorporated in 1955 model Auto-Vac vacuum sheet plastic forming machines is one called "3-D double-action drape." This is achieved by making clamping frame adjustable to any height up to 24 in. above molding table. This improvement, coupled with four-way adjustability of frame, allows versatile manufacturing operations.

Other improvements include G-E Calrod heating units, super-sensitive thermocouples to maintain temperature ±5 degrees, and flush-mounted instrument control panel with both automatic and manual controls. Dual depression buttons require operator to use both hands in starting forming cycle.

Auto-Vac machines also feature water-cooled frame, available on large models and metered blow-off for stripping the mold. They will perform controlled draping in which thermoplastic sheet is formed utilizing a male mold, bubble-pack packaging and Skinpak packaging in which film is formed tightly over card mounted item. Five standard machine sizes are 24 x 36, 30 x 50, 42 x 60, 42 x 72 and 48 x 72-in. Each machine is delivered with vacuum pump. Made by **Auto-Vac Co.**, 2120 Post Rd., Fairfield, Conn.

▲ For more details circle **NED-322 E5** on enclosed inquiry slip ▲

This Conveyor will serve you better — longer!



Weld-Bilt STEEL-BELT CONVEYORS

If you will compare the advantages of this "moving belt of interlocking steel", you can readily see why the WELD-BILT is today's most important new aid to materials moving . . . Far superior to other types of conveyor equipment.

HERE'S WHY —

POSITIVE TRACKING — always runs in a straight line — no weaving, buckling, stretching, creeping.

SLIP PROOF DRIVE — Weld-Bilt steel sprocket positive-engagement drive avoids any chance of slippage — for positive, accurately timed movement at any selected speed.

UNLIMITED BELT LIFE — Weld-Bilt conveyor surfaces are solid sheets of heavy steel or stainless steel to carry heaviest, roughest loads through years of service with minimum replacement expense.

FRICTION — NIL! — Individual links ride on ball bearing rollers in grease sealed raceways — for easier, smoother operation — at low power cost.

WRITE FOR BULLETIN AND FURTHER DETAILS. **WEST BEND EQUIPMENT CORP.** *Materials Handling Engineers*
311 Water Street, West Bend, Wisconsin.

▲ For more details circle **NED-323 E5** on enclosed inquiry slip ▲

Hone parts to .0001" tolerance on any lathe or drill press

The Odee-Hone quickly produces an accurately honed finish on any type of external cylindrical part. It removes a few tenths or several "thousandths" stock to bring parts to size in less time than is required to set up for grinding.

Corrects all out-of-roundness, waviness and chatter.

Hones parts from ½" to 2½" in diameter, any length, any material.

Requires no aligning, fixturing or wheel dressing.

No springs, no hinges to break or wear out.

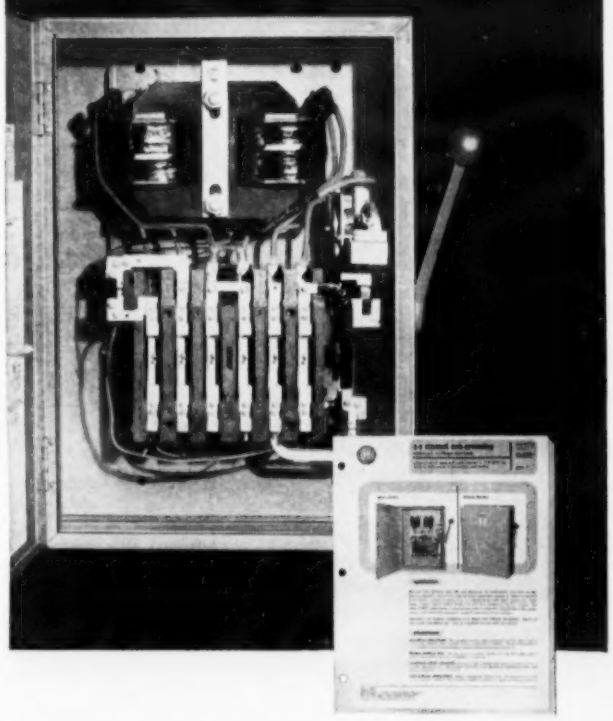
Weighs only 2½ pounds.

Can soon pay for itself in time saving. Write for detail sheet AR-116 and price.

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • DETROIT 38, MICHIGAN

▲ For more details circle **NED-324 E5** on enclosed inquiry slip ▲

Want more facts on industry's most advanced reduced voltage starter?



The new Westinghouse type MB autostarter eliminates forever all messy oil problems because it has air break contacts —*in all ratings.*

For all the facts on this new autostarter, send for a free copy of DB-10-600—or, for a demonstration of the facts, contact your Westinghouse sales engineer or nearby distributor. J-21889

YOU CAN BE SURE...IF IT'S **Westinghouse**

▲ For more details circle **NED-325 E5** on enclosed inquiry slip ▲

- FAST DELIVERY
- COMPETITIVELY PRICED
- FULL RANGE OF TYPES & SIZES

Here's good news for users of aluminum fasteners.

Lamson & Sessions has now added "standard" bolts, nuts and corters of aluminum alloy to its famous full line of fasteners.

Lamson has made aluminum fasteners for the aircraft industry for many years. Now they can supply the "standards" illustrated above. They come in a wide range of sizes, including machine screws down to No. 6 diameter by ¼" in length.

This means that users of aluminum bolts and nuts can now buy at competitive prices with the added advantage of fast delivery out of stock. From now on it will pay you to insist on Lamson & Sessions aluminum fasteners—made by one of the world's largest fastener manufacturers.

The LAMSON & SESSIONS Co.
1971 West 85th St., Cleveland 2, Ohio
Plants at: Cleveland and Kent, Ohio • Birmingham • Chicago

LAMSON'S FASTENER EXPERIENCE IS NOW YOURS IN ALUMINUM

▲ For more details circle **NED-326 E5** on enclosed inquiry slip ▲

Comfortable
WORKING CONDITIONS

PABCO
MASTIPAVE
FLOORS

Easy on the feet...less tiring... last for years!

Hard floors are killing to both workers and equipment. Pabco Mastipave Floors *save* both! Resilient Mastipave keeps workers fresh longer ...saves rough wear on equipment. Super-tough Mastipave stands up under heavy loads . . . is easy, economical to install. 36" wide in rolls, 9" x 9" in tiles. Colors: Terra Cotta or Black.

Only Pabco makes Mastipave Flooring... So, for full information SEND THIS COUPON TODAY!

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
Mail to Dept. D (nearest office)

GENTLEMEN: Without cost or obligation to me, please send your folder, "Every Building Needs Pabco MASTIPAVE."

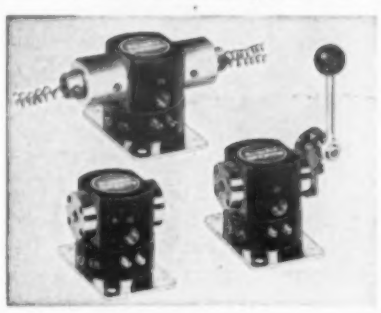
NAME_____

ADDRESS_____

CITY_____ STATE_____

▲ For more details circle **NED-327 E5** on enclosed inquiry slip ▲

AIR CONTROL VALVES
in solenoid, pilot and hand types

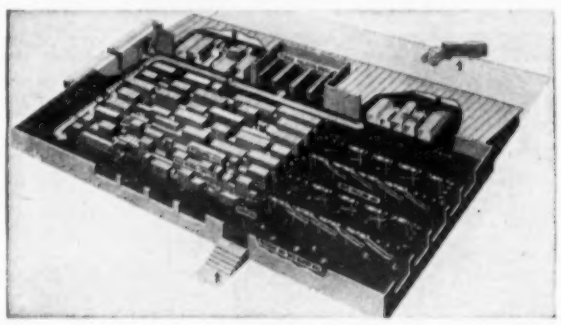


Twenty-four models are available in line of four-way air control valves with ¼, ⅜ or ½-in. ports for 5 to 150-psi service. Key models are the double-solenoid, air bleed, air pilot and hand type valves. Solenoid valves, available for 8 or 110-v operation, as well as the air bleed models are of the momentary contact type. Hand and air pilot valves are offered for either double actuation or spring return. All models feature two built-in speed controls. Made by **A. K. Allen Co.**, 57 Meserole Ave., Brooklyn 22, N. Y.

▲ For more details circle **NED-328 E5** on enclosed inquiry slip ▲

AUTOMATED WAREHOUSING
electronically controlled conveyors speed storage and handling of goods

Reduction of labor costs up to 50 per cent and increase in available storage space of more than 25 per cent are reported for the Kidde Warehousing



System. It provides advantages of bulk picking while retaining the desirable features of conventional order picking. Electronically controlled conveyors, automated by punched tabulating cards, facilitate the bulk picking method.

Conveyors provide a platform on which pickers can place and segregate a requested item together with the consignee's address which is contained on a tabulating card. Conveyor transports and then discharges each carrier load at a collecting station assigned to a specific destination for packaging, if necessary, and shipping. Discharge chutes are designed to act as temporary storage until the roving packing and shipping crew loads the truck.

The conveyor equipment was developed in co-operation with Link-Belt Co., and the controls with the Teleregister Corp. A prototype model for one application of this system has been built and operated at the Link-Belt Colmar, Pa. plant. Developed by **Walter Kidde Constructors, Inc.**, Dept. K, 140 Cedar St., New York, N. Y.

▲ For more details circle **NED-329 E5** on enclosed inquiry slip ▲

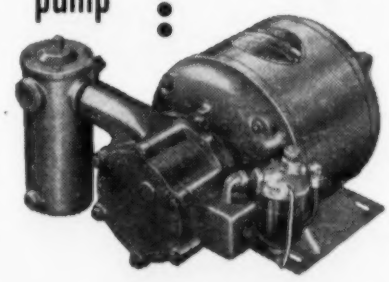
NEED VACUUM?

use the COMPACT pump

The Motoair Pump is built integral with its own motor to take the least amount of space and to avoid extra assembly necessary with separate drive.

Automatic lubrication complete with re-circulating system and visible oil reservoir is a feature of

the MOTOAIR®



Instantaneous suction and positive action is provided with the Motoair, being directly driven at the same rpm. as the motor.

ASK FOR CATALOG with performance data on various sizes of pumps. Oil-less models also available.

824

NEW JERSEY MACHINE Corporation
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

▲ For more details circle **NED-330 E5** on enclosed inquiry slip ▲

Tempilstik° FOR ALL
HEAT-DEPENDENT OPERATIONS

looks like a crayon... marks like a crayon... tells temperatures like a precision instrument!

Visit our booth #216 Welding & Allied Industries Exhibit Kansas City, June 8-10

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000° F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures—plus or minus 1%.

ALSO AVAILABLE IN LIQUID AND PELLET FORM . . . WRITE **ADVERTISING DIV.** FOR SAMPLE TEMPIL° PELLETS . . . STATE TEMPERATURES OF INTEREST—PLEASE!

Tempil°
CORPORATION
132 WEST 22ND STREET, NEW YORK 11, N. Y.

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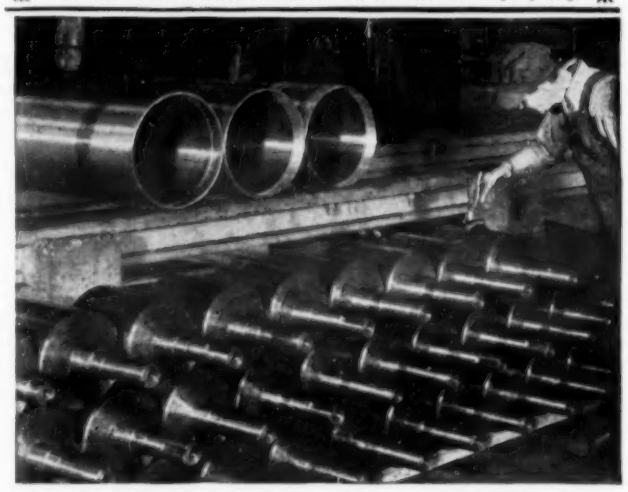


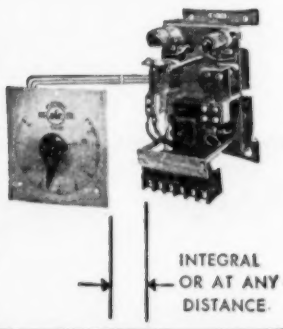
FOR ECONOMY IN MANY SEVERE SERVICES . . . it's hard to beat Shenango *centrifugally* cast parts of Meehanite Metal. These assembled rolls with steel journals are typical, long-lived examples. The combination of Shenango centrifugal casting and Meehanite Metal means pressure-dense grain for a smoother finish, less waste, greater strength and superior wear resistance. Porosity, sand inclusions, blow holes and other troublesome defects are a problem of the past. For informative bulletins on Shenango centrifugally cast parts—rough, semi- or finish-machined, ferrous *or* non-ferrous—write to: Shenango-Penn Mold Company, Centrifugal Castings Division, Dover, Ohio (Executive Offices: Pittsburgh, Pa.).

SHENANGO CENTRIFUGAL CASTINGS
COPPER, TIN, LEAD, ZINC BRONZES • MONEL METAL
ALUMINUM AND MANGANESE BRONZES • NI-RESIST • MEEHANITE METAL

▲ For more details circle **NED-332 E5** on enclosed inquiry slip ▲

high repeat accuracy

unaffected by tube age, voltage or temperature variations



For intervals from .02 to 30 sec., the "Atcotronic" Timer provides precise control of machine and process operations.

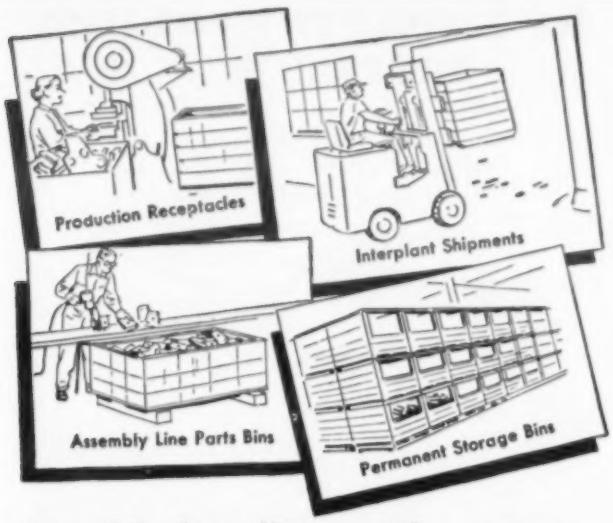
Compact design requires little panel space. The absence of moving parts assures dependable, trouble-free operation.

Two types, nine enclosure styles, four load actions. Most models in stock. For complete data, write for Bulletin N-90. Automatic Temperature Control Co., Inc., 5225 Pulaski Ave. Phila. 44, Pa.

atc®

ELECTRONIC TIMERS

▲ For more details circle **NED-333 E5** on enclosed inquiry slip ▲



Simplify handling with custom-built Generalift pallet boxes

They're light, strong, rugged, and low cost. Let General Box build them to incorporate the features that will simplify and speed handling, storage, shipment in your plant. To have a man call, write.

SEND FOR FREE BOOKLET on Generalift pallet boxes showing many ways in which these wirebounds are used to save time and money.

General Box
1849 Miner St., Des Plaines, Ill.
★ ★ ★ ★ ★

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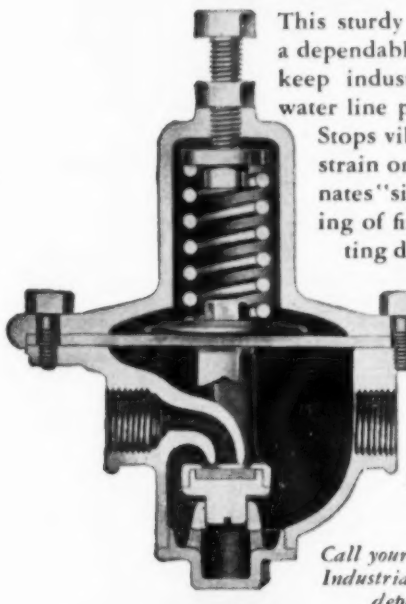
For Accurate Water Pressure
MASONEILAN No. 227
Reducing Valve



This sturdy reducing valve is a dependable, low cost way to keep industrial or domestic water line pressures constant. Stops vibration — reduces strain on plumbing. Eliminates "singing" and splashing of fixtures without cutting down on flow. Little or no maintenance required. Initial pressures up to 150 lbs., reduced to any pressure from 10 to 100 lbs. Sizes from ¼" to 2".

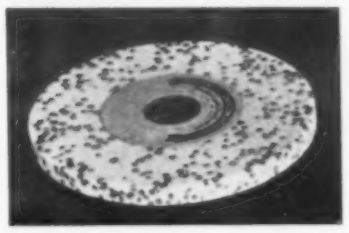
Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASONEILAN

MASON-NEILAN
REGULATOR CO.
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

▲ For more details circle NED-335 E5 on enclosed inquiry slip ▲

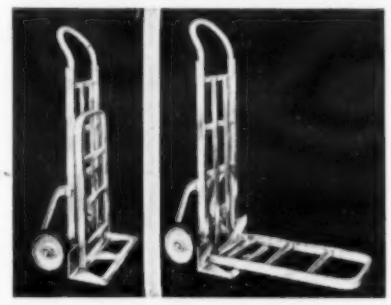
GRINDING WHEELS
for hard-to-grind steels



Fine grain in pellet form, distributed throughout the aluminum oxide MM process grinding wheels, gives a constant flow of fine abrasive between wheel and work. Developed for hard-to-grind steels and similar difficult jobs, wheels have a self-dressing action which makes a particular grade adaptable to a wider range of materials. Application can be to internal or external grinding. Made by **Macklin Co.**, Dept. M, Jackson, Mich.

▲ For more details circle NED-337 E5 on enclosed inquiry slip ▲

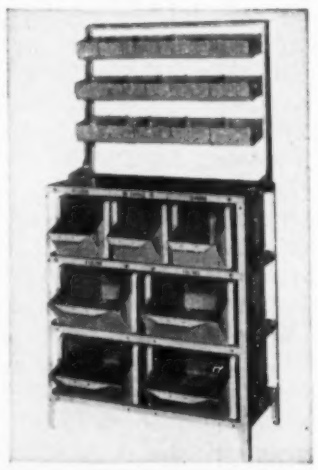
MAGNESIUM HAND TRUCK
has folding nose extension



Increased utility is obtained in this lightweight magnesium hand truck by use of folding nose extension. When lowered, extension facilitates handling bulky or unusual-shaped objects. In raised position, extension rests flush and out of way against truck side members for handling conventional loads. Extension can be supplied on any standard Magliner magnesium hand truck by **Magline Inc.**, P. O. Box 200, Pinconning, Mich.

▲ For more details circle NED-338 E5 on enclosed inquiry slip ▲

STORAGE-ASSEMBLY UNIT
holds parts conveniently for use



Flexibility of arrangement for parts storage and assembly operations is provided by this modular stand. It is 14 in. deep, 28 in. long and 30 in. high, and is fabricated of heavy gage steel with welded joints and baked enamel finish. Drilled holes in strategic locations permits grouping of stands into various units with connecting shelves for large or small work areas. Smooth top work area is designed for attachment of bench-top bin units. Made by **Bathey Mfg. Co.**, 161 S. Mill St., Plymouth, Mich.

▲ For more details circle NED-339 E5 on enclosed inquiry slip ▲

. . . to help you find the right packing in a hurry

Why take chances with "any old packing" and run the risk of shutdowns and the expense of frequent replacements?

This handy new "packing selector" tells you at a glance the *right* Johns-Manville packing or gasket for practically any power plant application. Its recommendations are based on the experience of J-M engineers in solving packing problems and lowering packing costs in thousands of plants.

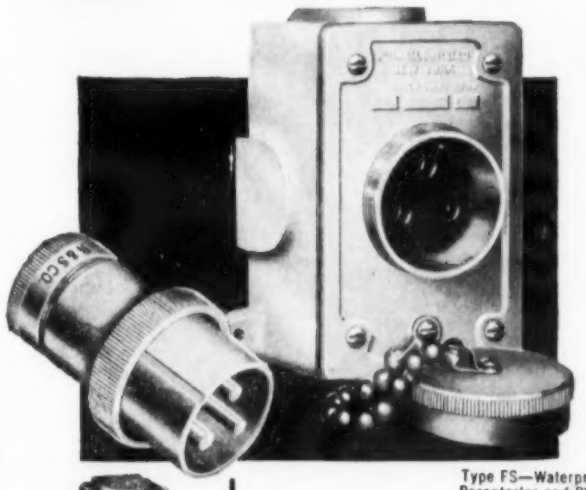
For your free copy, write Johns-Manville, Box 60, New York 16, N. Y. Ask for "Packings for the Power Plant."

Johns-Manville PACKINGS & GASKETS

▲ For more details circle NED-340 E5 on enclosed inquiry slip ▲

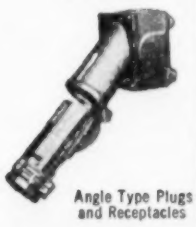
R&S

Receptacles Plugs and Switches

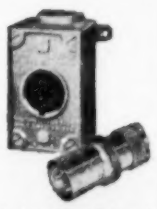


Type FS—Waterproof Receptacles and Plugs

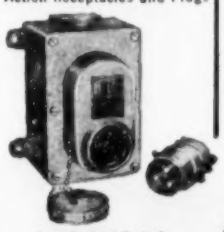
Type FS—Waterproof Switches



Angle Type Plugs and Receptacles



Explosion-Proof Delayed Action Receptacles and Plugs



Interlocked Switch Receptacles and Plugs

Ever-Lok Plugs and Receptacles

—first line of defense against weather, water and industrial hazards!

R&S receptacles, plugs, connectors and switches are available in an endless variety of weatherproof, waterproof and explosion-proof types, sizes and assembly combinations—the most complete line of fittings ever made to meet every industrial operating requirement.

Russell & Stoll quality adds maximum permanency and protection to your wiring plans.

Write for literature concerning items in which you have a specific interest.

RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N. Y. C11

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

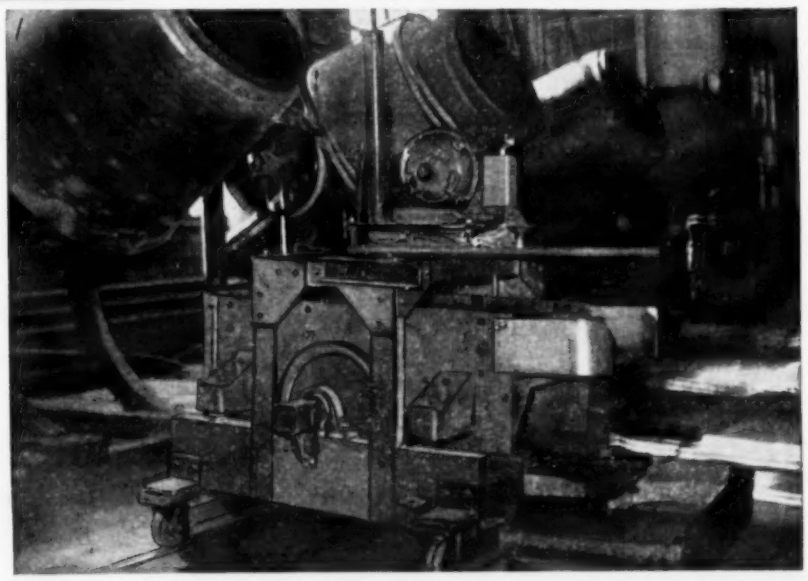
▲ For more details circle NED-341 E5 on enclosed inquiry slip ▲

Here's How The WATERBURY BUCKLE CO. Finds Good Use For This

MIGHTY-MITE

VIBRATING SCREEN

It seems there's no limit to the screening versatility of Mighty-Mite vibrating screens. This double deck Mighty-Mite separates sawdust from buckle parts after they come out of the tumbling barrel operation. Note the screen moves on tracks to take the feed from each of a total of six tumbling barrels. The finished product comes off the top deck of the Mighty-Mite into a tote box. The sawdust goes through the top deck and is caught on a solid pan lower deck to be discharged off the front of the screen into a second tote box.



MADE IN SINGLE AND DOUBLE DECK MODELS TO HANDLE UP TO 15 T.P.H.
SIZES 1½'x3' to 2'x8' • WIRE CLOTH OPENINGS TO MEET ANY REQUIREMENT

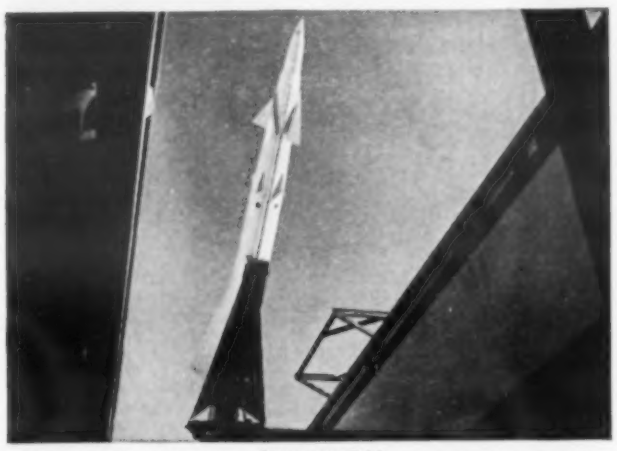
Remember . . .
WHEN THE LOAD IS LIGHT SCREEN IT RIGHT WITH MIGHTY-MITE

GET THE LABOR SAVING FACTS NOW!

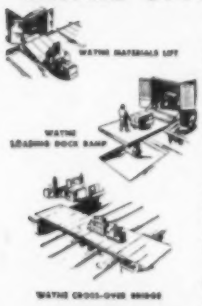
SEND FOR BULLETIN #12

SCREEN EQUIPMENT CO., INC. BUFFALO 25, N. Y.
One of America's Largest Makers of Vibrating Screens Exclusively

▲ For more details circle NED-336 E5 on enclosed inquiry slip ▲



WAYNE GIVES "NIKE" A LIFT TOO!



● If and when our key cities ever require instant unfailing protection from stratospheric bomber attacks Nike missiles will be on the job. So also will be the dependable Wayne hydraulic elevators at each Nike site for raising the giant missiles to the launching deck . . . and the automatically operated doors.

Throughout the world the dependability of design, operation and efficiency of Wayne Industrial Lifts is unsurpassed. Wayne manufactures a complete line of Dock Levelers, Platform Lifts, Truck Lifts, Cross-Over Bridges and Truck Service Lifts.

Whatever your lifting problem you can depend on Wayne Lifts. Write for LIFTronics—the booklet full of tips on materials handling.

Wayne Industrial Products

THE WAYNE PUMP COMPANY
Industrial Division • FORT WAYNE, INDIANA
Salisbury, Maryland • Toronto, Canada

▲ For more details circle **NED-343 E5** on enclosed inquiry slip ▲

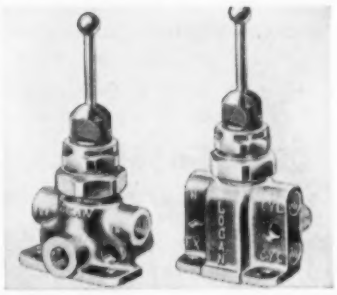
UNIVERSAL VERTICAL HEAD
converts horizontal machines to all-angle vertical mills

Self-contained, independent motor-driven vertical head will convert horizontal machines to all-angle vertical mills quickly and economically. It can be positioned angularly with spindle lever-locked in any position. Micrometer adjustment on quill front provides cutting measurements up to 0.001-in. over 2-in. travel.

Spindle speeds of 390, 710, 1200, 2500 or 5200 rpm are provided by ⅓-hp 110-v single-phase reversible motor located above the belt housing. Built-in switch above and in front of motor is accessible to operator. Spindle speeds can be changed quickly by releasing lock-lever that allows motor pulley to swing forward. Standard Y-type collets are available from 3/16 to ½-in. Photo shows display stand which is not integral part of vertical head. Made by **Rotex Punch Co.,** 2350-N Alvarado St., San Leandro, Calif.

▲ For more details circle **NED-345 E5** on enclosed inquiry slip ▲

AIR CONTROL VALVES
three models with locking toggle for various operating requirements



Model 6664 air control valve, one of three new models with locking toggles, is for control of bleeder and pilot-operated master valves. Removal of center port plug makes the two-way valve into a three-way model. Hand operated, it will lock in the off-center (angle) position and is released manually to vertical (off) position. Locking position can be rotated 360°.

Similar dual-control, two-way model 6665 has two exhaust openings which permit bleeding both ends of the master valve alternately. This provides automatic reversal when toggle lever is returned to normal (vertical) position.

Model 6676 is a four-way, two-position valve with locking toggle lever, designed for manual control of double-acting air cylinders. It locks at off-center (angle) position to maintain position of cylinder at end of stroke. Cylinder movement is reversed by manual or automatic trip dog release. Made by **Logansport Machine Co.,** 808 Center Ave., Logansport, Ind.

▲ For more details circle **NED-346 E5** on enclosed inquiry slip ▲

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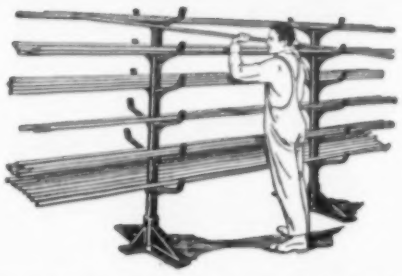
for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save mechanics' waiting time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle **NED-348 E5** on enclosed inquiry slip ▲

It's a superior waterproofing too

A special combination of asphalt and flat aluminum flakes provides sensational cooling and protective qualities. The asphalt penetrates, grips and weatherproofs . . . the aluminum flakes flow to the surface and flatten into an opaque, metallic shield that reflects heat, ultra-violet, even infra-red rays to preserve roofing and cool under roof area.

The liquid applies easily, as supplied in the container, by spray or brush. Each gallon guaranteed to contain at least 2 lbs. of aluminum pigment. ***Manufactured by Lewis Asphalt Engineering Corp., 30 Church St., New York 7, N. Y. Dept. 331***

50° Lower by Test
Heat lamp application shows 50° lower temperature under half of shingle coated with Karnak Aluminum-Asphalt Coating.

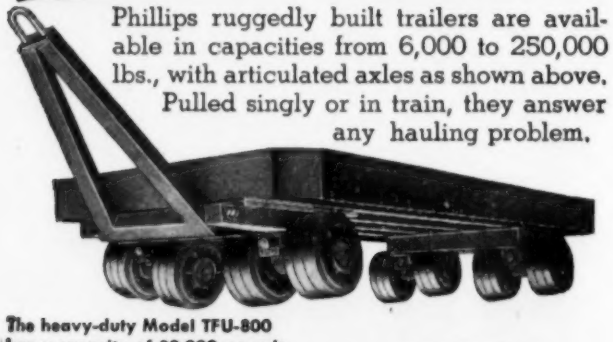
©L.A.E. Corp.

USE OTHER KARNAK PRODUCTS, TOO
Membrane Waterproofing Fabric · Asphalt Roof Coatings and Cements
Calking Compounds · Asphalt Emulsions · Tile Cement
Asphalt Paint · Wood Block Mastic · Joint Filler

▲ For more details circle **NED-349 E5** on enclosed inquiry slip ▲

Phillips *Industrial* TRAILERS

Phillips ruggedly built trailers are available in capacities from 6,000 to 250,000 lbs., with articulated axles as shown above. Pulled singly or in train, they answer any hauling problem.



The heavy-duty Model TFU-800 has a capacity of 80,000 pounds. *Ask for Bulletin E-35A.*

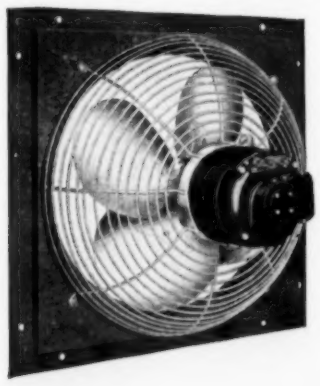
A sturdy, well-built trailer for general industrial hauling. Capacity of Model TF-60 is 6,000 lbs. *Ask for Bulletin E-16A.*

Phillips
CORPORATION

(formerly Phillips Mine & Mill Supply Co.)
Manufacturers Since 1863
16 Arch Street, Carnegie, Pa.

▲ For more details circle **NED-344 E5** on enclosed inquiry slip ▲

Two types, 10 basic sizes. Capacities from 610 CFM to 24,200 CFM.



nyb

PROPELLER FANS

Propeller type ventilating fans deliver large volumes of air at low resistance and low current consumption. All wheels are machine balanced for smooth, vibrationless operation. They are laboratory tested, accurately rated and fully guaranteed in strict accordance with Standard Codes.

CERTIFIED RATINGS · AUTHORIZED BY N.A.F.M.

Write for Bulletin 541

THE NEW YORK BLOWER COMPANY
SALES OFFICES • 3171 SOUTH SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

▲ For more details circle **NED-347 E5** on enclosed inquiry slip ▲

Now you can buy
a press brake like this "off the shelf" for $1455

Any shop where metal is bent can now take advantage of a new convenient way of buying quality all steel press brakes. There's no need for involved proposals or a long wait for delivery. You can now buy Verson No. 16-48 (shown above) and No. 1062 brakes as easily as buying a car. Write for spec sheets on either model and then place your order.

A Verson Press for every job from 60 tons up.

-Verson-

VERSON ALLSTEEL PRESS CO.
9329 S. Kenwood Ave., Chicago 19, Ill., So. Lamar at Ledbetter Dr., Dallas, Tex.

▲ For more details circle **NED-350 E5** on enclosed inquiry slip ▲

Precision "O" Rings

solve countless sealing problems!

- High quality, compression molded Precision "O" Rings assure trouble-free, leak-free sealing with gases, oils, gasoline, water, cooling fluids, refrigerants and many other special liquids.
- Precision "O" Rings meet S.A.E., J.I.C., A.S.T.M., A.M.S. and all military or commercial specifications and standards.
- Precision, the nation's largest exclusive producer of "O" Rings, provides the greatest range of sizes available.

Engineers everywhere are finding Precision "O" Rings the best solution to countless sealing problems. Let us help you with your design. Send us your inquiries. We want to serve you.

FREE-HANDBOOK OF "O" RING DATA ▶

Precision Rubber Products Corp.
Dept. 7, Oakridge Drive • Dayton 7, Ohio

▲ For more details circle NED-351 E5 on enclosed inquiry slip ▲

KEEPS BOILER BLOW-DOWN LINES *DROP TIGHT*

Yarway Seatless Blow-Off Valves keep blow-down lines *drop tight* because *there is no seat to score, wear, clog or leak.*

The well-known balanced sliding plunger design—combined with the newest metallurgical developments—make Yarway Seatless Blow-Off Valves rate top efficiency for low and medium pressure boiler plants.

Among high pressure plants, Yarway Unit Tandem Valves are used by more than 4 out of 5.

● Yarway Seatless Blow-Off Valve showing balanced sliding plunger design. Available single or in tandem (below).

If you operate a boiler, be sure to send for the Yarway Blow-Off Valve Books—Bulletin B-426 for pressures to 400 psi or Bulletin B-433 for higher pressures to 2500 psi. Write . . .

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY blow-off valves

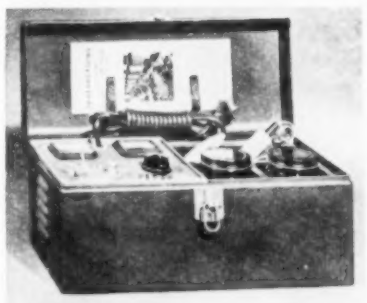
▲ For more details circle NED-352 E5 on enclosed inquiry slip ▲

BORING MACHINE CONTROL
punched tape used for automation

Automatic operation of a standard four-spindle Excello precision boring machine is possible using a tape control. Machine is modified with built-in electronic controls and circuitry and a tape "reader" housed in a specially built control cabinet. Hold co-ordinates and feed instructions are punched on the tape by a perforating machine similar to a typewriter. Electronic signals regulate the linear travel of the hydraulic cross slide and rotary motion of a specially-designed holding fixture mounted on the cross slide. Studies based on production of instrument gear trains indicate that the tape-controlled machine is suitable for medium-sized production lots. Tape preparation requires approximately 5 minutes per hold and complete changeover from one part to another can be accomplished in about 30 minutes. Machine can also be manually operated. Tape control developed by **Minneapolis-Honeywell Regulator Co.**, 2950 Fourth Ave. S., Minneapolis, Minn.

▲ For more details circle NED-353 E5 on enclosed inquiry slip ▲

PORTABLE PLATERS
apply light or heavy platings on practically any metal



Light or heavy platings on small or large surfaces, or specific areas on practically any metal including chromium, stainless steel and aluminum can be applied with this portable plater. Applications include silver plating electrical contacts of any kind or size; repair and maintenance of commercial platings, including military aircraft parts; antifriction or anticorrosive coating; and parts build-up.

Work is first prepared with suitable abrasives, or with activators. Plating current is turned on, applicator is moistened in Coatalyte and plating is applied with rubbing action of applicator. Average deposition is 0.0001-in. per 16 sq in. in 15-20 seconds. Plater is complete with power unit and plating supplies and operates on 110-120 v, 50-60 cycles ac. Available metals include nickel, tin, cadmium, zinc, copper, brass, silver, gold, lead, indium and Rapidmetal. Made by **Rapid Electroplating Process, Inc.**, Dept. NED, 1414 S. Wabash Ave., Chicago 5, Ill.

▲ For more details circle NED-354 E5 on enclosed inquiry slip ▲

NEW ELECTRIC VIBRATOR

Quiet!

A compact, powerful unit designed to speed the flow of stubborn materials through all types of bins, hoppers and chutes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

Bin Stuck Lately?

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-355 E5 on enclosed inquiry slip ▲

NEW

PANGBORN HYDRO-FINISH

For easier handling, added efficiency, look to the new Pangborn Hydro-Finish. Hydro-Finish cleans and finishes molds and dies in minutes, holding fine tolerances. And now it offers many new benefits! Pangborn has done away with the pump; air jet sluriators now keep the abrasive in suspension. This means a lower investment and fewer moving parts. Optional equipment includes a loading stand that simplifies handling, washing and inhibitor application. The cabinet has been redesigned for more efficient operation. These and other advantages make the Pangborn Hydro-Finish ideal for precision cleaning and finishing.

For full details on Hydro-Finish, write for Bulletin 1402 to: PANGBORN CORP., 2400 Pangborn Boulevard, Hagerstown, Md. *Manufacturers of Blast Cleaning and Dust Control Equipment.*

Pangborn
BLAST CLEANS CHEAPER

▲ For more details circle NED-356 E5 on enclosed inquiry slip ▲

WINZELER *Stamped Gears*

GET THIS FREE STAMPED GEAR GUIDE!

SEND TODAY *for useful 4-page folder . . a valuable guide to all that is best in the mass production and use of low-cost Stamped Gears, Tools and Assemblies. Many various types are described. Also contains technical data, tables, ideas, suggestions. Use company stationery, please!*

WINZELER MANUFACTURING & TOOL CO.
1712 WEST ARCADE PLACE, CHICAGO 12, ILLINOIS

▲ For more details circle NED-357 E5 on enclosed inquiry slip ▲

THE "*Write*" LABEL... *Anywhere!*

LABELON PLASTIC *Write on it* SELF-STICKING **TAPE**

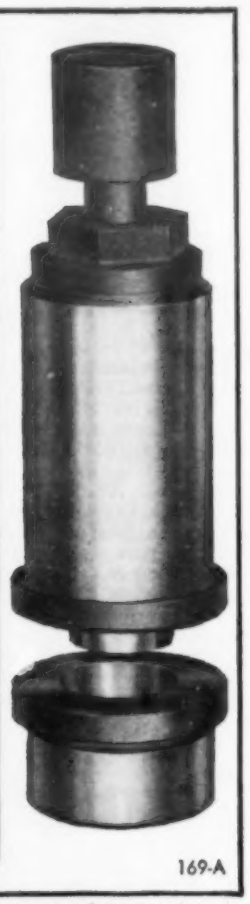
For samples and prices, see your nearest dealer or write Dept. NED-5

LABELON TAPE CO., INC., 450 Atlantic Ave., Rochester 9, N.Y.

▲ For more details circle NED-358 E5 on enclosed inquiry slip ▲

STANDARDIZED UNIVERSAL INDEX PLUNGERS

save time, save money



Save the time and expense of designing and machining special plungers for multi-station tools with Universal Index Plungers. They greatly simplify jig and fixture manufacture because plunger body and bushing have same diameter—all holes can be bored with same tool, often in same setting. Soft pin knob, hardened and ground locating bushing, plunger and plunger bushing. Straight and Taper Plungers in standard sizes, complete, ready for installation at approximately ¼ the cost of specially made plungers.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

169-A

▲ For more details circle **NED-359 E5** on enclosed inquiry slip ▲

WALES

HOLE PUNCHING & NOTCHING EQUIPMENT

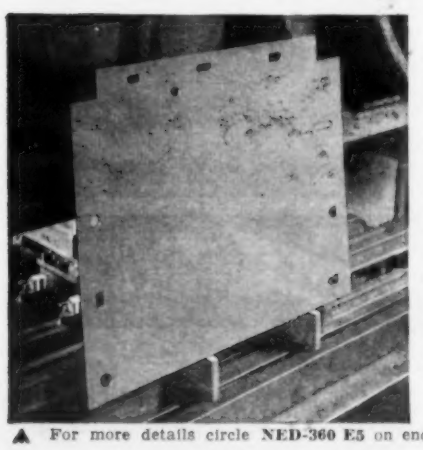
By providing simpler, faster set-up methods, Wales Hole Punching and Notching Units *insure greater production economies.*

For example, a group of these independent, self-contained Wales Units may be set up for punching and notching to produce parts the same day a pattern is released for production. These "Right-Into-Production" advantages are made possible by proven Wales features:

- Nothing attached to press ram
- Punches and dies always in perfect alignment
- No die set required
- Independent and self-contained
- Set up in press brakes and stamping presses on templates, T-slotted plates or press brake rails
- Uniform shut height requires only one ram adjustment
- Units may be used in unlimited set-ups eliminating "dead storage"

Before putting holes and notches in angles, channels, extrusions and sheets by *any* method, have the Wales facts at your finger tips. Write today for your personal copy of Wales BL catalog.

WALES-STRIPPIT CORPORATION
George F. Wales, Chairman
563 Payne Avenue, North Tonawanda, N. Y.
(Between Buffalo and Niagara Falls)
Wales-Strippit of Canada, Ltd., Hamilton, Ontario
Specialists in Punching and Notching Equipment



ABOVE
Wales Type "BL" Hole Punching Units and Wales Type "N" Notching Units in a combination staggered hole punching and notching set-up in a press brake.

LEFT
Typical round and shaped holes plus corner notches produced by Wales Type "BL" Hole Punching Units and Type "N" Notching Units in a stamping press.

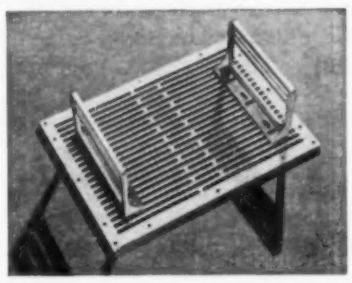
▲ For more details circle **NED-360 E5** on enclosed inquiry slip ▲

SEALED SWITCH
various actuators available

Sealed against temperature cycling, extreme range of heat or cold, and all foreign elements, this switch can be reset even when coated with ice. Wiring conduit is opposite the actuating mechanism for flexibility in application requirements. The hermetically sealed switch is available with roller, leaf, cam and other actuators. Complying with government specifications, it is rated at 10 amp for 125/250 v ac, 28 v dc, inductive and 28 v dc, resistive. Made by **Electro-Snap Switch & Mfg. Co.,** 4232 W. Lake St., Chicago 24, Ill.

▲ For more details circle **NED-361 E5** on enclosed inquiry slip ▲

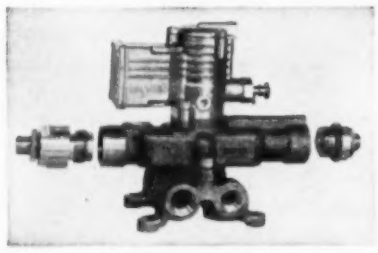
SERVO PLATES
reinforced with stainless steel



Top side fastening and precision alignment are features of this breadboard equipment which requires no supporting legs or suspensions. The servo plates are reinforced with stainless steel sheets and hangers and accessories are fastened to the plate from the top side with special T-nut cap screws. Slots in hangers permit additional fine adjustments. Made by **Sterling Precision Instrument Corp.,** Dept. NED, 34-17 Lawrence St., Flushing 54, N. Y.

▲ For more details circle **NED-362 E5** on enclosed inquiry slip ▲

SPEED CONTROL
for solenoid pilot operated valves

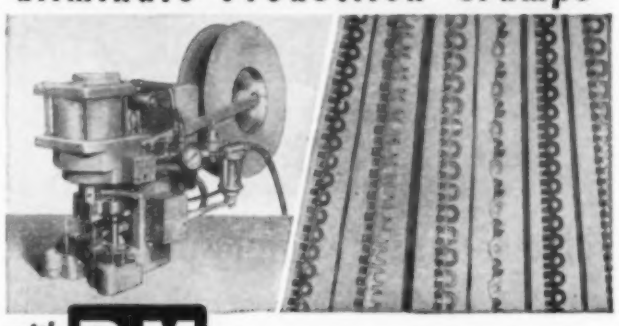


Speed control feature can be given to Speed King solenoid pilot - operated valves without using separate valves between the control valve and the cylinder. This is accomplished by addition of adjusting screws in the end caps which will restrict the stroke of the main stem of the valve and thus restrict the flow of cylinder exhaust air through the valve. Kits are available to convert valves already in service to controlled speed. Speed King valves with built-in speed control are available in four-way foot-mounted and sub-base mounted, single and double solenoid types in sizes ¼, ⅜, ½, ¾ and 1 in. Offered by **Valvair Corp.,** 947 Beardsley Ave., Akron 11, O.

▲ For more details circle **NED-363 E5** on enclosed inquiry slip ▲

▲ For more details circle **NED-364 E5** on enclosed inquiry slip ▲

Eliminate Production Cramps



with **P-M**

COLD CRIMPING MACHINE

Here's the modern, low-cost method for volume electric terminal attaching. This rugged machine uses P-M strip terminals in continuous form from disposable reels. It automatically crimps and cuts off through simple, quiet air pressure operation.

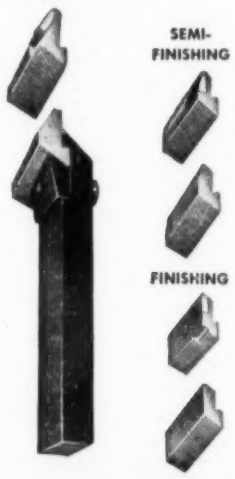
Get the facts on the many advanced design features of this low-cost P-M machine that makes tool changing a cinch. Ask for catalog page and information on the complete line of P-M strip terminals.

P-M PATTON-MacGUYER COMPANY
16 Virginia Ave., Providence, R. I.

▲ For more details circle **NED-365 E5** on enclosed inquiry slip ▲

Save! RAPIDOR TURNING TOOLS *feature* INTERCHANGEABLE BLADES

ONLY ONE TOOL NEEDED



Here are ways Bokum can help you save on turning tool investments:

1. Long tool life; blades only need be replaced.
2. 1 holder for three different lathe operations; high speed steel and carbide-tipped blades available.
3. Cutting, clearance angles are built into the cutter; there's constant clearance throughout life of tool.
4. Shape of cross section remains constant.
5. Resharpen top face only.
6. No set-up problems.
7. Rigid, large chip removal—cool cutting action.
8. For roughing, semi-finishing and finishing; for cutting off and threading.

Write Dept. T for Catalog 454.

PATENTS PENDING

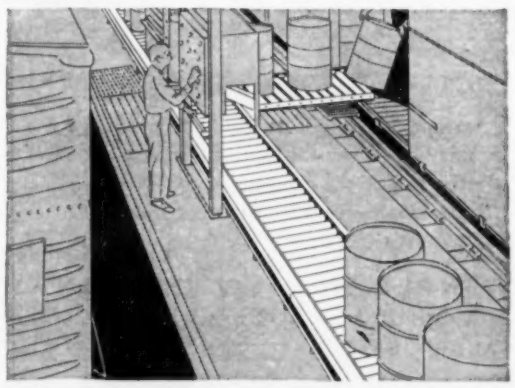
TRADE MARK REG. U. S. PAT. OFF.

BOKUM TOOL CO. 14775 Wildemere Ave., Detroit 38, Mich.

▲ For more details circle **NED-366 E5** on enclosed inquiry slip ▲

Live Roller Conveyers Play an Important Part in Many Continuous-Flow Handling Systems

ELLWOOD CITY, PA.—Many manufacturers are discovering live roller conveyers to be the answer to their package conveying problems. It is possible to deflect loads and hold them on the live roller conveyers without stopping the conveyer—they can be reversible and operated at whatever speed required. *Mathews* Live Roller Conveyers can be belt- or chain-driven, hung close to the ceiling, set at working height on the floor, or can operate between buildings. Call your nearby *Mathews* representative, or ask for complete information. Write MATHEWS CONVEYER COMPANY, Ellwood City, Pa.



50th Anniversary MATHEWS CONVEYERS 1905 1955

MATHEWS

▲ For more details circle **NED-367 E5** on enclosed inquiry slip ▲

for extra mileage

Extra mileage, that means so much to your production costs, is assured by *Jewel Brand* Abrasive Belts because . . . (1) there is a *Jewel Brand* Belt in the precise size and grit to meet your specific needs whether you grind, smooth, or polish metal, wood, plastics, leather, or rubber; (2) Jewel Brand Abrasive Belts all feature the unique velvet joint that lasts longer; (3) their faster, cleaner, cooler cutting action is time-proven on the job. What's more, AP delivery service excels. Try it. Abrasive Products, Inc., 525 Pearl St., South Braintree, Mass.

JEWEL BRAND
coated **ABRASIVES**

For more details circle NED-368 E5 on enclosed inquiry slip

NICE...

• PERFORMANCE
... FROM ALL ANGLES!
• COST
• APPEARANCE

In product design there are three major considerations—COST, PERFORMANCE and APPEARANCE... and the proper design combination of these with respect to every component, determines the success of the product, mechanically and commercially.

HAVE YOU ANY BEARING PROBLEMS ON WHICH NICE CAN BE OF SERVICE?

Write for Cat. No. 150

NICE BALL BEARING CO.
NICETOWN • PHILADELPHIA • PENNSYLVANIA

For more details circle NED-369 E5 on enclosed inquiry slip

Sensational **NEW** *features*

FOSTORIA LOCALITE

The Perfect Lighting Tool for Machine Assembly Inspection

$8.12 Each in std. pkg. of 8 Less $10.50 ea.

Directs Light Exactly as Needed

MODEL 2-WX-700
Overall Length 31"

Reflector—New bell ventilated shape with 5½" orifice. Rotates 360°. Accommodates 100 watt A-21 or R-30 lamps. Also PAR-38, R-40, RS-40. Available with lens, if desired.

Arm Joints — New patented tension disc design. Easy, smooth action with only one hand. Available with 1, 2 or 3 arms.

Base—Universal for vertical or horizonal mounting. Also adaptable to outlet boxes. Collet revolves 360°.

Wiring—Medium screw porcelain socket. "T" rated toggle switch. 8 ft. POT-32 18-2 heavily insulated oil resistant wiring with molded plug.

Finish—Gray baked enamel. Reflector interior, high temperature White.

WRITE for complete catalog of Localite models for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION
Fostoria, Ohio
Localites available through wholesalers everywhere

LOCALITE fostoria for Light ON the Job

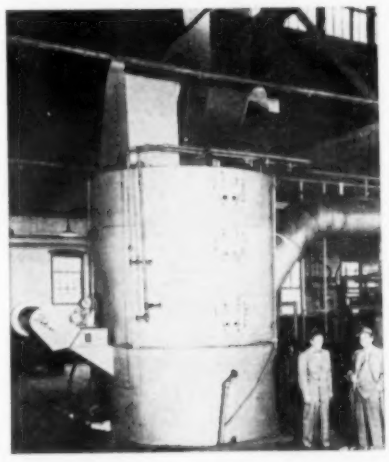
For more details circle NED-370 E5 on enclosed inquiry slip

WEIGH FEEDERS housing stops plastic contamination

Enclosed housing available for all models of Exact Weight injection molding machine weigh feeders prevents contamination of plastic molding material. It permits visible indication of every charge. Entire weigh feeding mechanism is enclosed on two sides with metal walls and on two sides with lock - equipped clear plastic doors. Magnetic tramp iron pickups are available, as are automatic compensators. Four models of weigh feeders are offered with the enclosed housing, the smallest being a 28-oz charge capacity machine with a 100-lb supply hopper, and the largest having a charge capacity of 6¾ lb and a 350-lb hopper. Made by **Exact Weight Scale Co.,** 930 W. Fifth Ave., Columbus 8, O.

For more details circle NED-371 E5 on enclosed inquiry slip

DUST COLLECTOR uses wet collection principle to clean contaminated air



Air to be cleaned is drawn into the Hydro - Filter, a wet collection type dust collector, and brought into contact with water so as to cause the airborne dust to transfer to the liquid stream. During its upward passage, contaminated air is forced through two wet beds of small glass spheres, two "rains" of water droplets and a layer of water. Top bed of glass spheres removes water droplets from the air.

Slow speed conveyor in the sludge basin discharges sludge into a receiver. Particles, too fine or light to settle out, overflow to the sewer or settling pond. Filter has wide range of uses, but dust must be insoluble in water, capable of being wetted by water and sufficiently dense to settle. Electric timers automatically control washing of the moisture eliminator bed and shut down the sludge removal conveyor when necessary. Made by **National Dust Collector Corp.,** 605 Machinery Hall Bldg., Chicago 6, Ill.

For more details circle NED-372 E5 on enclosed inquiry slip

HERE'S THE ANSWER TO "TRAVERSE and FEED" AND "CLOSE and HOLD" OPERATIONS !

DUDCO's new PF-100 Series DOUBLE PUMPS with VALVE PANELS...give you 2000 psi "Variable Delivery" Functioning with the Economy and Reliability of Constant Delivery Operation . . . eliminate circuit components and reduce piping . . . assure top system efficiency and increase and improve production from Presses, Casting and Molding Machines, Closing and Clamping Devices, Machine Tools.

TWO VANES ARE BETTER THAN ONE!
The hydraulically balanced DUAL-VANES in DUDCO Pumps, as contrasted with conventional designs, maintain MULTIPLE AREAS OF CONTACT ON THE CAM RING... doubling the number of effective barriers to slippage and power loss. This patented principle is an exclusive DUDCO feature!

Write for Bulletin DP-308... contains performance data, delivery control circuits, installation drawings; suggests applications. It's Free!

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.
INTERNATIONAL SALES OFFICE, 90 WEST ST., NEW YORK 6.

For more details circle NED-373 E5 on enclosed inquiry slip

3 NEW LINES OF CORDS AVAILABLE

Now Anaconda offers a new full line of cords for *each* major application. You can select the *one* best suited for your needs—based on good engineering and sound economy. SECURITYFLEX* Cords for severest applications; INDUSTRIAL "all-purpose" Cords for hard usage; SERVICE Cords used with most appliances. All are made with typical Anaconda emphasis on quality! Call your electrical wholesaler or the man from Anaconda today. And send for Anaconda's new free bulletin: "Portable Cords." Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York. 55337

*Reg. U. S. Pat. Off.

ANACONDA®

For more details circle NED-374 E5 on enclosed inquiry slip

55 Gallons of WET or DRY Cleaning Capacity with the TORNADO®

JUMBO CONVERSION KIT

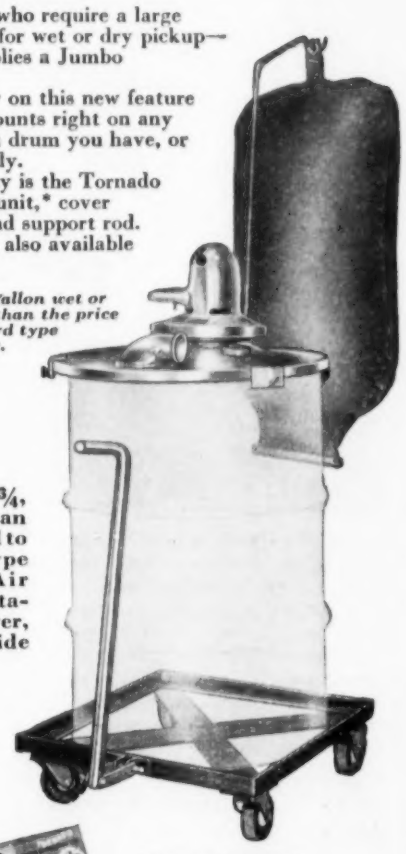
Here's another Tornado First in "modern cleaning methods."

For those users who require a large capacity cleaner—for wet or dry pickup—Tornado now supplies a Jumbo Conversion Kit.

You save plenty on this new feature because the kit mounts right on any standard 55 gallon drum you have, or can purchase locally.

All you need buy is the Tornado removable motor unit,* cover plate, filter bag and support rod. A 4 wheel dolly is also available for portability.

Net result—a 55 gallon wet or dry cleaner at less than the price of a regular standard type commercial cleaner.



*Motor units in ¾, 1 or 1½ H.P. can also be converted to (1) Shoulder type vacuum, (2) Air sweeper, (3) Portable electric blower, or (4) Insecticide sprayer.

WRITE FOR TORNADO BULLETIN 694

If you are already using a Standard Tornado Cleaner with a removable motor unit, it can also be used with the Jumbo Conversion Kit—all you need is the cover plate, filter bag and rod.

BREUER ELECTRIC MFG. CO.
5116 North Ravenswood Avenue • Chicago 40, Illinois

For more details circle NED-375 E5 on enclosed inquiry slip

PROTECT EXTERIOR MASONRY WALLS

CONTROL WATER PENETRATION WITH THIS

SILICONE WATER REPELLENT

Dehydratine No. 22 provides an easy, low-cost way to keep water out of porous but sound masonry walls. This colorless, silicone water repellent protects against water damage inside and out, without changing the appearance of your structure. Dehydratine No. 22 minimizes efflorescence and prevents discoloration. You simply spray or brush it on. Write for complete information. Address Dept. H10-568.

A Subsidiary of Sun Chemical Corporation

A. C. Horn Co., Inc.
Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION
HORN • HUDSON • WILLEY (paints, maintenance and construction materials, industrial coatings) • WARWICK (textile and industrial chemicals) • WARWICK WAX (refiners of specialty waxes) • RUTHERFORD (lithographic equipment) • SUN SUPPLY (lithographic supplies) • GENERAL PRINTING INK (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • MORRILL (news inks) • and ELECTRO-TECHNICAL PRODUCTS (coatings and plastics)

▲ For more details circle **NED-376 E5** on enclosed inquiry slip ▲

Anchor Ducts to Concrete and Cut Your Costs Up to 80% with the REMINGTON STUD DRIVER

"Paid for itself in just two jobs." Reports like this keep coming in from sheetmetal men about the Remington Stud Driver. They're setting up to 5 studs a minute in concrete and steel with this amazing powder-actuated tool. Savings run as high as 80%, compared to conventional fastening methods!

Economy like this gives your maintenance crew a definite advantage. They can tackle almost any fastening job. Completely self-powered, the Stud Driver requires no outside source of power—no troublesome wires or cables. Its light weight and compact size bring every job within easy reach.

It will pay you to get all the facts about the Remington Stud Driver. It's been test-proved to be the world's speediest fastening system and can help you do the job faster and easier than ever before. Just send in the coupon for complete information.

"If It's Remington—It's Right!"

Remington DU PONT

Listed & Approved by Underwriters' Laboratories, Inc.

MAIL THIS COUPON TODAY

Industrial Sales Division, Dept. NED-5
Remington Arms Co., Inc., Bridgeport 2, Conn

Please send me a *free* copy of the new booklet showing how I can cut my fastening costs.

*Name*_____
*Position*_____
*Firm*_____
*Address*_____
*City*_____ *State*_____

▲ For more details circle **NED-377 E5** on enclosed inquiry slip ▲

HYDRAULIC GEAR PUMP
delivers 42 gpm constant at 2000 psi

Designed for heavy duty industrial and mobile equipment applications, this H series gear type oil hydraulic pump handles continuous service at pressures to 2000 psi. Single pumps are built in sizes to give discharge volumes from 12 to 42 gpm, and they can be used in tandem on single shaft. Heavy bearings assure alignment. Low slippage affords volumetric efficiencies of 90 per cent and higher. Outboard bearings accommodate shock loading. Made by **Commercial Shearing & Stamping Co.,** Dept. NED-PR, 1775 Logan Ave., Youngstown 1, O.

▲ For more details circle **NED-378 E5** on enclosed inquiry slip ▲

HAT & COAT RACK
floor and wall models

Bolted aluminum components are used in manufacture of this line of hat and coat racks, which includes 3, 4 and 5-ft wide floor models and 2, 3, 4, 6, 8 and 10-ft wall models. Both types have a permanent high luster polished surface finish. They can be ordered with either single or double hat and package shelves. Nonstandard sizes may be specified. Made by **Safway Metal Products Co.,** Dept. N, 1111 Webb Ave., Detroit, Mich.

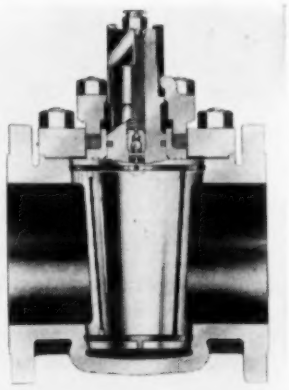
▲ For more details circle **NED-379 E5** on enclosed inquiry slip ▲

TRIPOD VISE STAND
grips 1/8 to 2½-in. pipe

This Pipemaster tripod vise stand adjusts automatically on pipe from 1/8 to 2½-in. diameter and clamps on it with less than one turn of screw. Three-way top jaw with milled teeth and reversible bottom jaws are tool steel. Stand has large, hinged malleable shelf that not only insures rigidity, but provides space for tools. It has vertical visible pipe bender and ceiling hold-down screw. Made by **Erie Tool Works,** 733 W. Twelfth St., Erie, Pa.

▲ For more details circle **NED-380 E5** on enclosed inquiry slip ▲

LUBRICATED PLUG VALVE
in 150 to 800-psi pressure classes

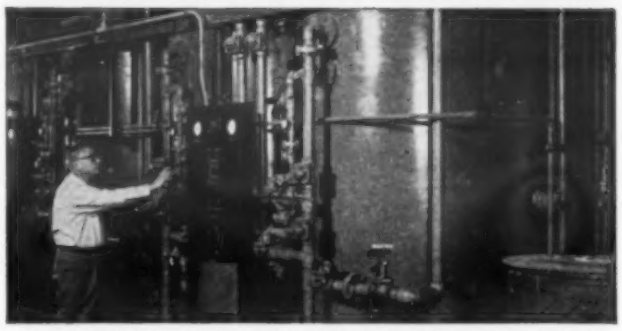


Feature of lubricated plug valve is multiple sealing which includes lubricant, O-ring, gland liner and packing seals. Four vertical lubrication grooves in plug assure uniform and adequate distribution of sealing lubricant around port areas. Hydrocarbon-resistant O-ring seals between gland liner and plug shank, while resilient packing seals between gland liner and cover. Gland liner is OIC alloy 40 bronze with low friction bearing characteristics and melting point in excess of 1750° F. Position indicator on top of plug shank and visual stop integral with gland show position of plug at a glance. Long life, ease of operation and adjustment, and positive pressure sealing are features of these valves, offered in pressure classes from 150 to 800 psi, water or gas, and in sizes ½ to 12 in. Made by **Ohio Injector Co.,** Dept. NED, Wadsworth, O.

▲ For more details circle **NED-381 E5** on enclosed inquiry slip ▲

Another new development using

B. F. Goodrich Chemical *raw materials*



B. F. Goodrich Chemical Company does not make this pipe. We supply only the Geon resin.

PIPE DREAMS COME TRUE WITH GEON RIGID VINYL!

If you've dreamed of cutting piping costs, listen to this: General Electric Appliance Park reworked plans for a major piping installation, cut material costs in half by using pipe and fittings made from Geon rigid vinyl.

Corrosion-resistant Geon pipe—often more serviceable than high grade steel and alloys—is light in weight, saves in installation and changeovers, resists acids, alkalis, oil, and gas, and stands up to the hard knocks of an industrial environment.

High-impact pipe is just one of many money-saving uses for versatile Geon polyvinyl materials. Others include long-wearing floor tiles, colorful upholstery, tough insulation for wire and cable, hundreds more. To find out how Geon can fit into your future, please write Dept. BU-3, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

Geon Polyvinyl Materials

GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable
GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors

▲ For more details circle **NED-382 E5** on enclosed inquiry slip ▲

YOU CAN GET 42 STOCK SIZES 3/16" to 3"

HALLOWELL

SOLID STEEL COLLARS from your industrial distributor

All of these precision-machined solid steel collars are size-marked for quick identification, and fitted with the famous self-locking UNBRAKO Socket Set Screw for positive positioning on the shaft. Write for Bulletin 868. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

HALLOWELL POWER TRANSMISSION DIVISION **SPS** JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-383 E5** on enclosed inquiry slip ▲

Ostuco's "Single-Source Service"

All your tubing needs are filled on one order. This eliminates multiple instructions to different plants. OSTUCO seamless and electric-welded steel tubing meets your most exacting requirements for quality, shaping, fabrication, and finishing.

You can turn hidden costs into extra profit with **special-quality** OSTUCO Tubing. Discuss your particular problems with an OSTUCO Sales Engineer. Write direct, or contact your nearby sales office for complete information. For immediate action, submit your blueprints for quotation.

OSTUCO SHELBY, OHIO — **OHIO SEAMLESS TUBE DIVISION** OF COPPERWELD STEEL COMPANY • SHELBY, OHIO

▲ For more details circle **NED-384 E5** on enclosed inquiry slip ▲

POSITIVE DRIVE...QUICK CHANGE

WITH CONTINENTAL COUNTERBORES . . .

CTW

Reduce your tool cost, improve accuracy, increase production with Continental standard drive interchangeable cutting tools. Cutters have a balanced, indestructible drive that will not stick, break, and is hand detachable.

Call your Ex-Cell-O representative or write us.

54-8

CONTINENTAL TOOL WORKS
Division of Ex-Cell-O Corporation
DETROIT 32, MICHIGAN

▲ For more details circle NED-385 E5 on enclosed inquiry slip ▲

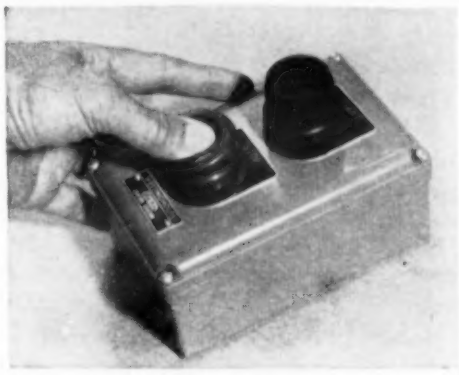
PHOTOCOPY MACHINE makes copies in 30 seconds

Sharp, dry copies of anything written, printed, drawn or photographed may be produced automatically in 30 seconds by the Dial-A-Matic Auto - Stat photocopy machine. An illuminated dial is set to match the type of original to be copied. Machine measures 24 x 5 x 9 in. and accommodates paper up to 15 in. wide by any length, almost 40 per cent wider than previous models. Self-adjusting developer rollers take any weight paper from tissue to heavy card stock. The operator never comes in contact with the solution, as filling and emptying the developer tank is with a plastic squeeze bottle and tube. Made by **American Photocopy Equipment Co.**, Dept. NER, 1920 W. Peterson Ave., Chicago 26, Ill.

▲ For more details circle NED-388 E5 on enclosed inquiry slip ▲

PUSHBUTTON ACCESSORIES for oil-tight installations

Increased durability, versatility and convenience are reported for three accessories for Oil-Tite pushbutton stations. Flexible neoprene caps attach over un-



shrouded pushbuttons to prevent entrance of dust, and they afford trouble-free operation when sheathed in ice or snow. These red or black caps, illustrated, fit snugly over pushbuttons after removal of the retaining ring. Full-stroke Select-O-Push operator teams up with a double-pole contact block to make one compact unit to replace two previously single-pole double-throw units. Circuit to be energized is selected by dialing the operator head left or right. Lever operator for two-unit pushbutton stations permits precise operation even when operator is wearing heavy gloves. Movement of lever in either of two directions causes rocker arm to depress the proper button for completion of that circuit. Spring returns mechanism to neutral. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle NED-389 E5 on enclosed inquiry slip ▲

The PROFILOMETER® can help you get

90% to 800% MORE PIECES PER GRIND

from cutting tools of every type!

WELL-KNOWN COMPANIES are getting *90% to 800% more pieces per grind*—with important savings in production time, tool-sharpening time, and tool replacement cost. Here's how they do it:

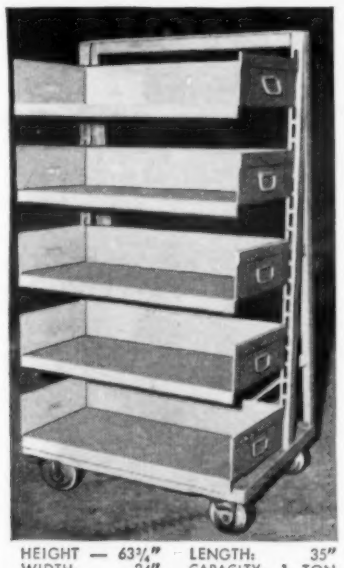
In sharpening, they grind or lap the tool faces to a finish of 1 to 5 microinches. A difference of a few microinches can vitally affect performance; so they *specify* the microinch finish and *measure* it with the PROFILOMETER to make SURE. The savings obtained far outweigh the little time required to make such measurements.

FREE BULLETIN L22 gives details — includes *case histories* of savings obtained. Write for it!

Profilometer is a registered trade mark.

MICROMETRICAL MANUFACTURING COMPANY
333 S. MAIN ST. ANN ARBOR, MICH.

▲ For more details circle NED-391 E5 on enclosed inquiry slip ▲



HEIGHT — 63¾" LENGTH: 35"
WIDTH: 24" CAPACITY: 1 TON

Equipped with 6" roller bearing steel wheel casters

VER-T-RACK

- EXPEDITES MATERIALS UP TO 60% FASTER
- SAVES MAN HOURS
- SAVES FLOOR SPACE
- ELIMINATES MATERIAL DAMAGE
- REDUCES WORKER FATIGUE
- GREATER SAFETY FACTOR
- MAXIMUM EFFICIENCY AT MINIMUM COST

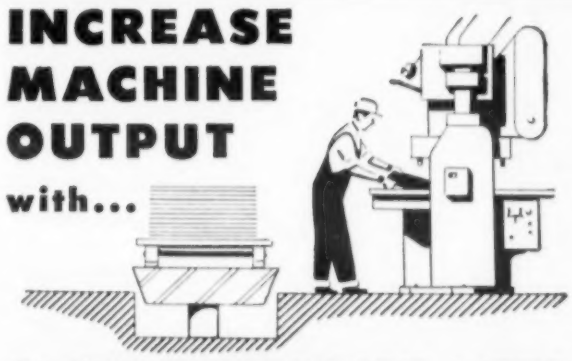
VER-T-RACK can be handled with lift truck. Trays are adjustable on **VER-T-RACK**

ONLY **$45** Plus $5.50 for each tray open as shown or semi-closed

THE VINCE BASNIK CO.
2020 Center St., Dept. N. Cleveland, O.

▲ For more details circle NED-386 E5 on enclosed inquiry slip ▲

INCREASE MACHINE OUTPUT with...



GLOBE PRODUCTION LIFTS

Heavy lifting is eliminated, work is speeded, when raw material is kept at feeding level by a Globe lift. Loaded skids or pallets, deposited on floor-flush platform, are lifted by smooth push-button control to convenient level. As material is used from top of pile, lift is "inched" upward to maintain proper height.

Globe methods provide countless opportunities for saving by hydraulic lifting of materials to feed-in positions, heavy equipment to test racks, and removal of processed work.

For complete information write for "MODERN LIFTING" (Form 663). Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Pa.

GLOBE PRODUCTION LIFTS
PLANTS: DES MOINES — PHILADELPHIA

HYDRAULIC AND MECHANICAL LIFTS for every industrial need

▲ For more details circle NED-392 E5 on enclosed inquiry slip ▲

new Bostitch
AIR-DRIVEN TACKER
drives and countersinks staples like these...

(actual sizes)

The new Bostitch T-3 speeds any number of woodworking jobs—from tacking glazing strips, decorative molding, and furniture backing, to pinning tenons in mortises. It does the work of comparable size brads or finishing nails. Does it faster, neater, more securely.

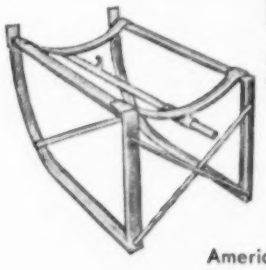
Drives narrow crown staples with leg lengths from 3/16" to 3/4". Legs press outward to increase holding power. Countersinking leaves work all ready for puttying and painting.

New lightweight tacker operates at high speed with little effort. Slight pressure against work triggers machine. Quick-fill magazine holds staples in any one of five leg lengths.

For demonstration, write Bostitch, Inc., 685 Mechanic Street, Westerly, R. I.

Fasten it better and faster with BOSTITCH® STAPLERS AND STAPLES

▲ For more details circle NED-387 E5 on enclosed inquiry slip ▲



Load heavy drums single-handed with AMERICAN barrel cradles

American Barrel and Drum Cradles make fast, easy work of every loading job—even for one man—save time, money, back-breaking strain, prevent injury.

- Patented, disappearing loading bar makes loading safer, faster, less work.
- All-steel construction gives strength without needless weight.
- Height 18", with or without wheels.
- Shipped semi-knocked-down in cartons to save warehouse space, keep cradles in top condition.

Stocked and sold nationally by over 350 Distributors

Barrel Cradles are only one item of a full line of American Manual Material-Handling Equipment for every type of moving job—over 50 models and sizes.

Write for free catalog.

AMERICAN HAND TRUCK HEADQUARTERS

The American Pulley Company
4294 Wissahickon Ave., Phila. 29, Pa.
Please rush your free catalog showing the complete American Material-Handling line.

Name_____
Company_____
Address_____
City_____ Zone____ State_____

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MEASURING & CHECKING EQUIPMENT *Tailored to your job*

Write for Catalog today

MACHINE PRODUCTS CORP.
Dept. B, 6771 East McNichols Rd., Detroit 12, Mich.

▲ For more details circle NED-393 E5 on enclosed inquiry slip ▲

Write FOR CATALOG #851 which describes Commander's Production Tools

Commander MFG. CO.
4220 W. KINZIE STREET
CHICAGO 24, ILLINOIS

▲ For more details circle NED-394 E5 on enclosed inquiry slip ▲

Complete testing facilities at our modern new assembly plant take the guesswork out of Cylinder performance. Before shipment every O-M Air and Hydraulic Cylinder is "power-tested" and approved, assuring dependable prolonged service under all normal operating conditions.

Standard, semi-standard, "special" air and hydraulic cylinders available in full range of sizes (1½" to 8" bores) with standard, 2 to 1 or oversize rods. Completely interchangeable parts. Immediate delivery on many sizes.

O-M CYLINDERS fit where others won't

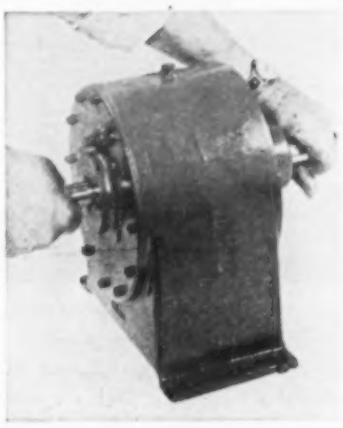
Write for FREE CATALOG!
complete set of ½-scale templates, showing all cylinders, mounts and mounting brackets.

MAIL COUPON NOW!

ORTMAN-MILLER MACHINE COMPANY
9 143rd Street, Hammond, Indiana
☐ Have representative call ☐ Send latest catalog
☐ Send ½-scale templates
Name_____ Position_____
Company_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-395 E5 on enclosed inquiry slip ▲

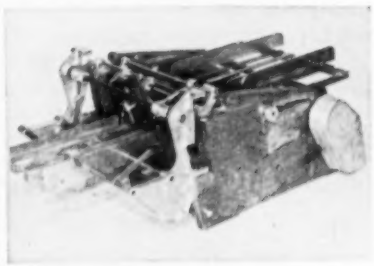
TORQUE CONVERTER
boosts small motor power 2.8 times



When used with gasoline engines under 10 hp, Fluomatic fluid torque multiplier permits the engine to assume full speed and horsepower, regardless of load. Also adaptable to similarly rated electric motors, unit eliminates shock starting or stopping. It is available as a standard package unit or with custom modifications for use on screw conveyors, winches, hoisting devices, and other equipment. Used with a multiple bank of electric motors, the 27½-lb torque converter eliminates need for electronic synchronization. Made by **Little Beaver Industries,** Dept. N, 38809 Mentor Ave., Willoughby, O.

▲ For more details circle NED-396 E5 on enclosed inquiry slip ▲

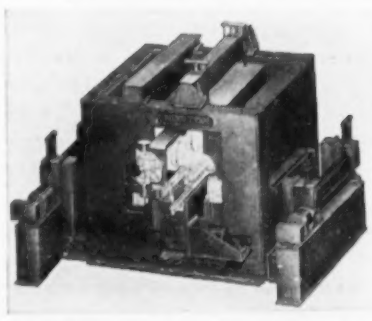
ROUND CONTAINER LABELER
label feeding is automatic



Automatic label feed and pivoted frame which opens for easy cleaning are features of this semiautomatic labeler for round containers. Unit will handle bottles, canisters and drums from 4-oz to 5-gal capacity, with minimum diameter of 1½ in. and maximum height of 13½ in. Labels from 2 x 3 in. to 12 x 18 in. can be handled. Labeler is driven by standard ¼-hp single phase, 60-cycle motor. Stepped-sprockets provide three operating speeds. Construction throughout is of corrosion-resistant metals. Made by **Atlantic Supply Co.,** Dept. K, 16 N. Greene St., Baltimore 1, Md.

▲ For more details circle NED-397 E5 on enclosed inquiry slip ▲

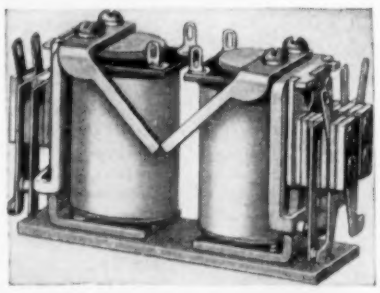
SHEAR-WELDER-TRIMMER
joins coils in continuous lines



Galvanizing, pickling, annealing and slitting lines are among the applications of model RB shear - weld - trimmer. It automatically joins the ends of coiled strip stock for continuous process lines. Its basic components are entry and exit pinch rolls, entry and exit strip centering devices, transfer carriage with independent clamp jaws, double-blade up-cut shear and die set, welder-trimmer unit, roller lift and roller hold-down devices. All components are contained in a single unit. Made by **Morton Mfg. Co.,** Broadway & Hoyt, Muskegon Heights, Mich.

▲ For more details circle NED-398 E5 on enclosed inquiry slip ▲

MINIATURE RELAY
latches in energized position



Measuring 2⅝ x 1 x 1⅝ in., this miniature latch-in relay is available for 6, 12, 24, 48 and 115-v dc operation. It comprises an operating relay and reset relay with mechanically interlocking arms. When operating coil pulls the armature into the energized position, the levers mechanically lock the armature in place. Armature can be reset electrically or manually. Latching levers are heat treated and hard chrome plated alloy steel. Variety of contact ratings and contact combinations is available. Made by **Magnecraft Electric Co.,** 3350K W. Grand Ave., Chicago 51, Ill.

▲ For more details circle NED-399 E5 on enclosed inquiry slip ▲

YOU WILL LIKE
UDYLITE ROUND LEAD ANODES
FOR CHROMIUM PLATING

Udylite can furnish immediately round lead anodes for chromium plating. This type anode, made of special lead-tin alloy, has become increasingly popular and has numerous advantages over flat anodes.

The Udylite round lead anodes come with two hook sizes to meet varying anode rod thicknesses. Hooks are plastic coated cast copper with knife-edged contacts.

Udylite round lead anodes have these advantages: More uniform distribution of current over entire anode surface—No build-up of lead chromate as with flat anodes—Less maintenance—Plenty of conductivity and greatly increased anode life—Greater rigidity which eliminates warping.

For full information regarding Udylite round lead anodes write to us today.

THE UDYLITE CORPORATION
DETROIT 11, MICHIGAN

▲ For more details circle NED-400 E5 on enclosed inquiry slip ▲

It's Yours
THIS NEW 8-PAGE FOLDER on Peerless Formed Wire Product Fabrication

This new 8-page brochure shows the plant facilities for fabrication of Peerless' formed wire products . . . from wire storage room through shipping . . . from the simple forming operations through the most complex welding and assembly.

Peerless has been one of the foremost formed wire product fabricators since 1910. There's plenty to learn about Peerless' formed wire product fabrication from this booklet and . . . it's yours for the asking. *Write today!*

Peerless
PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET • LAFAYETTE, INDIANA

▲ For more details circle NED-401 E5 on enclosed inquiry slip ▲

DRILL CONCRETE

EASIER! FASTER! BETTER!

RCD Drill Bit for use with rotary electric or air drills

Drills perfect, precision holes even in *reinforced* concrete. Super fast and easy (6" deep hole in 1 minute!) Pays for itself in time-savings. Made to last.

Widely used for the past five years by most of the largest U. S. corporations, manufacturers, and utilities, as well as thousands of smaller firms, installation men, contractors, electricians, plumbers, etc. Superior concrete drilling **plus longer drill bit life due to FREE factory resharpening service** keeps them sold.

RCD Concrete Drill Bit—the original and unsurpassed. Sizes: ¼"—4" (larger sizes special)

Personalized guarantee given to every RCD Drill Bit user
If dealer cannot supply (or service), buy direct.

Send for illustrated literature and price list

ROTARY CONCRETE DRILL CO.
650 S. Arroyo Parkway, Pasadena 1, Calif.

▲ For more details circle NED-402 E5 on enclosed inquiry slip ▲

SPENCER VACUUM CLEANING

The above machine rated at 1 HP. Has a large dirt capacity and uses standard Spencer vacuum hose and tools. Attachments are available for collecting liquids and cleaning dry mops. Expected life is 8 to 12 years.

The unit rolls on ball bearing wheels and casters. The dirt can is easily removed, emptied and replaced. Because of its power, dirt capacity and long life with low maintenance, it is used in hundreds of factory offices. Other portable units from 1½ to 15 HP and Stationary Systems up to 100 HP are recommended for use in your industrial plant. Ask for Bulletin Nos. 155 and 114-H.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD

500-A

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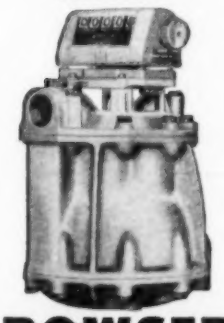
Automated

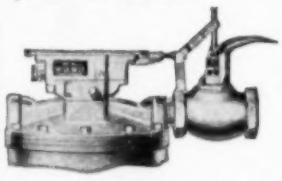
liquid handling depends on meters...

SPECIFY THE INDUSTRY-PROVED

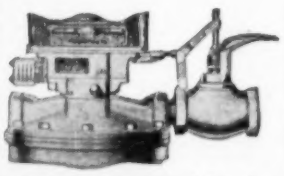


BOWSER XACTO

Recording printer mounts on meter. Prints quantity dispensed or received.



Delivers predetermined quantities up to 10,000 gallons, then shuts off.



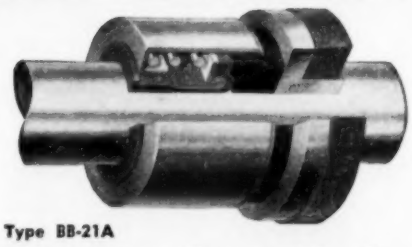
A repeating control for delivery of predetermined quantities. Automatic. With or less recording printer.

BOWSER, INC., FORT WAYNE, IND.

1381 E. CREIGHTON AVE.

▲ For more details circle NED-404 E5 on enclosed inquiry slip ▲

GARLOCK MECHANIPAK SEAL



Type BB-21A

for Rotating Pump Shafts at pressures up to 150 p.s.i.

The Garlock BB-21A MECHANIPAK Seal, proven in service on thousands of water pumps, provides a low cost *leakless* seal. It occupies very small space; comes completely assembled ready to install.

SAVE 3 WAYS

This MECHANIPAK Seal pays for itself! (1) Reduces maintenance costs (2) Absolutely no shaft wear (3) Cuts down time.

Write today for Bulletin AD-150

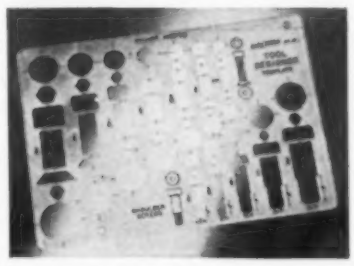
THE GARLOCK PACKING COMPANY, PALMYRA, NEW YORK

In Canada: The Garlock Packing Company of Canada Ltd., Toronto, Ont. Branch Offices in Most Principal Cities

GARLOCK

▲ For more details circle NED-405 E5 on enclosed inquiry slip ▲

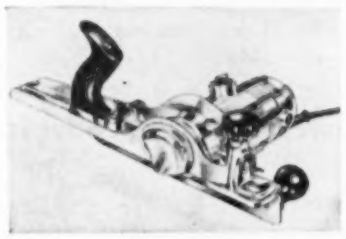
SCREW & WRENCH TEMPLATE made of plastic with 69 cut-outs



Seven sizes of socket screws from No. 10 to ⅝-in. thread diameter and five shoulder screw sizes from ¼ to ⅝-in. shank diameter can be drawn with the No. 81 tool designer template. All sizes have cutouts for respective head diameter and wrench size, front elevation and top view. With a total of 69 cut-outs, template is made of 0.030-in. matte finish mathematical quality plastic. Size is 8½ x 6 in. and price is $3.00. Made by **Rapidsign, Inc.**, P. O. Box 592A, Glendale, Calif.

▲ For more details circle NED-406 E5 on enclosed inquiry slip ▲

ELECTRIC PLANE makes cuts up to 2-1/16 in. wide



Electric ¾-hp motor used on this power plane is interchangeable with a router attachment or bench shaper plate. Exhaust blows chips away before they can lodge under the 16-in. shoe and mar the finished surface. Plane makes cuts up to 2 1/16-in. wide. An adjustment levels the cutter blade quickly, and a 2-in. fence permits the blade to be tilted 45 degrees inward and 15 degrees outward. Knob controls depth adjustments up to 3/32-in. Made by **Stanley Works**, Electric Tools Div., 104 Elm St., New Britain, Conn.

▲ For more details circle NED-407 E5 on enclosed inquiry slip ▲

CIRCULAR SLIDE RULE easily operated by the layman

Persons with limited mathematical training can readily use the Layman's Calculator, a circular slide rule which features easy operation and functional simplicity. Computations are made by dialing in the numbers with the cursor which is lockable. Scale division numbers face the operator as on a clock dial and the answer never runs off the scale. It is always read at the same stop position on the answer dial. Average scale length is 17 in. Rule has deci-trigonometric scales on the back. Price is $9.95. Made by **Lithocalculator Co.**, Dept. 21, 31 St. Joseph St., Arcadia, Calif.

▲ For more details circle NED-408 E5 on enclosed inquiry slip ▲

4 WAY MIXING ACTION PRODUCES HOMOGENEOUS BLENDS... Reduces Mixing Costs—

with the

STURTEVANT BLENDER

Four separate mixing actions in the Sturtevant Blender assure complete blending of various materials regardless of weights, densities, finenesses, or other physical properties.

This mixing action provides a thoroughly blended product with no substances floating to remain unmixed.

Sturtevant Blenders are available in mixing capacities from 500 to 20,000 pounds. Write for information or engineering assistance.

STURTEVANT MILL COMPANY

114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS

Designers and Manufacturers of

CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS • MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

▲ For more details circle NED-409 E5 on enclosed inquiry slip ▲

this time-study saves you money!

BUSINESSES SAVE HOURS EACH DAY

you save 16 seconds every time you press a button

Actual time studies taken in hundreds of businesses show that an average of 18 seconds is required to make an "inside" speech contact through the switchboard. With *your own* AMPLICALL "clear line" *internal* communication system —you get *2-second speech contact* within and between departments. AMPLICALL frees busy switchboards for important outside calls —keeps personnel *on the job*, keeps talk terse—saves hours each day for the average business. AMPLICALL saves you money—pays for itself. There is a system to fit your special needs. Get the full facts today!

SEE YOUR PHONE BOOK

For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified phone directory—or write direct for full information.

ELECTRONIC AMPLICALL INTERCOMMUNICATION

RAULAND-BORG CORPORATION

3515-D Addison Street, Chicago 19, Illinois

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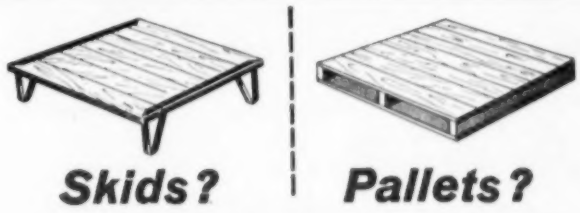


Skids? Pallets?

HANDLE 'EM BOTH

with RAYMOND Lightweight

HAND PALLET TRUCK with SKID ADAPTER

Why buy one hand truck for skids . . . another for pallets . . . when this RAYMOND Lift Truck will handle them both !

This RAYMOND Pallet Truck is now available with a hinged superstructure for handling skid loads. The superstructure raises out of the way when your load is on pallets . . . lowers into position when you're handling skids. It cuts hand truck costs in half for dual skid and pallet handling . . . ideal when converting from skid to pallet operation.

The RAYMOND Hydraulic Truck is lightweight . . . thanks to its aluminum alloy construction . . . yet plenty rugged to provide years of use. It's highly maneuverable, easy to pull, has foot pedals for lifting and lowering loads. Capacity: 2,000 lbs.

The RAYMOND CORPORATION

4157 Madison St., Greene, N.Y.

☐ Please send details on Hand Pallet Truck with Skid Adapter.

☐ Please send me latest RAYMOND Hydraulic Equipment Catalog.

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

▲ For more details circle NED-411 E5 on enclosed inquiry slip ▲

Wolverine

Heavy Duty

QUICK ACTION TOGGLE CLAMPS

Extra CLEARANCE
Extra SPEED

and now Extra SERVICE assured by the use of

HARDENED PINS & BUSHINGS

at all bearing points, in the popular C-100, CQ-1100, and CQ-800 series Toggle Clamps.

Rugged construction—drop forgings, cast steel and solid bar stock.

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

Write for Bulletin

CQ-1100 Series

CQ-800 Series

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

For more details circle NED-412 E5 on enclosed inquiry slip

Hardness Readings in 2 seconds!

Webster PORTABLE Hardness Testers FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity 1/4". Simple, rugged design, easy maintenance.

Free FOLDER provides full information and shows sectional views.

MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

For more details circle NED-413 E5 on enclosed inquiry slip

Leading Auto Makers Save $1,250,000* On Dies Equipped With

ELASTICONE GUIDE PIN COVERS

*Actual savings reported during one year on materials, maintenance and manpower!

Leading auto makers, like many other major industries, have reduced the costs of die operations by equipping dies with Elasticones. Elasticones close the gaps between pins and bushings, protecting pins against nicks and scratches, reducing die breakage, increasing press time!

Elasticones reduce the need for spare dies, make automatic press work possible. Write today for complete technical data and literature. Elasticones are available in stock and custom sizes.

CENTRAL

2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

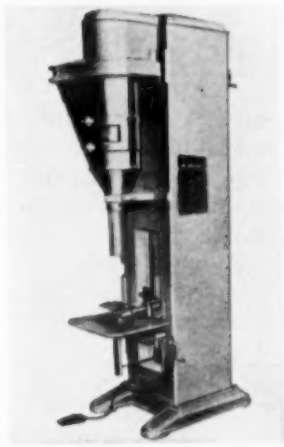
For more details circle NED-414 E5 on enclosed inquiry slip

PULSE COUNTER
capable of 8000 counts per minute

Industrial counting and computer applications are uses of the Cyclonome pulse counter which has a counting rate of 0 to 130 counts per second at an accuracy of ±½-count. It uses a six-figure Veeder-Root register driven by a stepping motor, started and stopped magnetically each half-cycle. Direct current pulses down to 3 milliseconds wide (50 per cent "on" time minimum 130 pulses per second) or alternating current cycles with a minimum half-cycle of 3 milliseconds may be counted. Photoelectric sensing equipment adaptable to production and process counting can be furnished. Stepping motor is offered as a separate component, with either 1.3 or 2.5 lb-in. torque. Maximum stepping speed is 260 half-steps per second. Made by **Sigma Instruments, Inc.**, 72 Pearl St., Boston 85, Mass.

For more details circle NED-415 E5 on enclosed inquiry slip

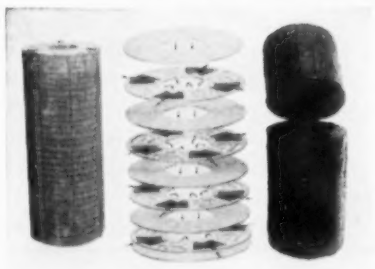
AUGER FILLER
for powder, paste, granular products



Micrometer adjustment control in the model EG universal auger filler assures accurate filling of cans, jars, boxes, bags and other containers with capacities ranging from ⅛-oz to 5 lb. Machine is designed for volumetric filling, pressure packaging, gross weighing or combination auger-vacuum filling. Simplified driving mechanism, located above the filling station for cleanliness, has totally enclosed gears operating in oil. Magnetic clutch is self-adjusting. Auger speed is adjustable from 500 to 1000 rpm, while filling cycle can be pretimed from 15 to 30 units per minute. Made by **Stokes & Smith Co.**, 4992 Summerdale Ave., Philadelphia 24, Pa.

For more details circle NED-416 E5 on enclosed inquiry slip

FILTER CARTRIDGE
removes particles down to 5 microns



Filtering area of 2500 sq in. and ability to hold up to 14 lb of solid matter are features of low pressure drop type F-718 and FW-718 filter cartridges. Two types are similar in construction, but permit different methods of installation. Density of filter paper used results in removal of particle sizes down to 5 microns. Degree of initial particle size removal can be controlled by use of special papers and other materials. Cellulose cartridges will not remove detergents and oxidation inhibitors. Made by **Hilliard Corp.**, Purifier Div., 40 W. Fourth St., Elmira, N. Y.

For more details circle NED-417 E5 on enclosed inquiry slip

SMALL ROTARY SHEAR
hand operated, cuts 16-gage steel

Toolmaster, a hand operated rotary shear will cut steel (other than stainless) as heavy as 16-gage without undue effort, or it can cut heavier gages of aluminum or brass. Width of cut can be adjusted from 2-in. maximum down to trim as fine as 0.005-in. Shear can be bolted to bench or truck. It uses replaceable carbon steel cutting wheels. Made by **Fidelity Tool Supply, Inc.**, Dept. T, 309 Vine St., Camden 2, N. J.

For more details circle NED-418 E5 on enclosed inquiry slip

ALL STEEL CONSTRUCTION
rugged, dependable
SPACE SAVING CYLINDERS for better design

ONE WEEK DELIVERY

CARTER

You get these features

- Full 1 to 1 cartridge rod bearings
- Key type stainless steel lock ring
- Cup or piston ring construction
- Self-adjusting spring loaded packing
- Heavy wall tubing . . . 6 to 1 safety factor
- 40% less mounting space
- Cylinders with built in valves

CYLINDERS • AIR and HYDRAULIC

The most compact, powerful, dependable and efficient cylinders available. Any product is better and easier to maintain if it's Carter equipped. No matter what your application, there is a Carter cylinder to fit your product. Call us in today. You'll be glad you did.

ALL NEW LOW COST CLAMP CYLINDER Write For Details

SEND FOR COMPLETE CATALOG FILE

Carter Controls, inc.
2876 BERNICE ROAD, LANSING, ILLINOIS
PHONE 1305

For more details circle NED-419 E5 on enclosed inquiry slip

With NIAGARA METERS

They're Controlling LIQUID VOLUME Automatically YOU CAN DO IT TOO!

• FOOD INDUSTRIES
• CHEMICAL PLANTS
• DAIRY PRODUCTS
• SYNTHETIC TEXTILES
• PETROLEUM

Imagine the time and guesswork you can save by measuring liquid volumes automatically. Just set the hand of the NIAGARA Electri-Contact METER at the volume desired and turn on the flow of liquid.

SET IT — FORGET IT

It will turn off automatically. NIAGARA METERS enable your men to handle more work.

Practically every type of industry is using and acclaiming the accuracy of NIAGARA METERS. They precisely measure liquid volumes from one to one thousand gallons a minute!

There's a NIAGARA METER for nearly every type of liquid including most chemicals. Investigate the advantages of NIAGARA METERS.

Write today for full details.

BUFFALO METER CO.
2903 MAIN STREET • BUFFALO, NEW YORK

For more details circle NED-420 E5 on enclosed inquiry slip

NEW ADJUSTABLE I. D. GROOVE GAGE

These 3 gages measure groove diameters

from .495" to 6.00"

FEDERAL Model 99P Series Indicator Gages measure inside diameters of retaining grooves with exceptional accuracy—also other internal dimensions including shallow recesses, and similar conditions. Weight of gage or operator's hand does not affect the accuracy. These gages are simple—easily and precisely handled—and avoid the limitations and awkwardness found in other types. Ask for descriptive bulletin.

FEDERAL PRODUCTS CORPORATION
5175 Eddy Street, Providence 1, R. I.

Ask FEDERAL
FOR ANYTHING IN MODERN GAGES...

Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting or Automatically Controlling Dimensions on Machines

▲ For more details circle **NED-421 E5** on enclosed inquiry slip ▲

NOW TROUBLE-FREE deburring & countersinking with the NEW FORD UNIFLUTE COUNTERSINK

Engineered for maximum efficiency with simple *single flute design*, FORD'S new high speed steel Uniflute *ends all deburring and countersinking troubles* on soft stringy steels, aluminum, brass, bronze, plastic, rubber, wood and other materials. FORD'S new HSS Uniflute covers *a wide range of hole sizes with one diameter tool.* Its cutting action is effective from the working point to the major diameter. Job-engineered shear angles allow superior free cutting, insure trouble-free action, even at higher speeds.

FORD regrinding service adds tool life, reduces tool costs!

FREE information · **Bulletin HSS 408** gives complete information about Ford's new Uniflute countersink, plus easy 4-step instructions on how you can resharpen the Uniflute in your own tool room.
Catalogue No. 207 gives all facts on more than 277 FORD rotary tools including HSS ground cutters, rotary files, countersinks; CARBIDE cutters, end mills, grinding burs. **Send today!**

M. A. FORD MFG. CO., INC.
Pioneers in rotary tools for more than 30 years
721 W. River Street, Davenport, Iowa

▲ For more details circle **NED-422 E5** on enclosed inquiry slip ▲

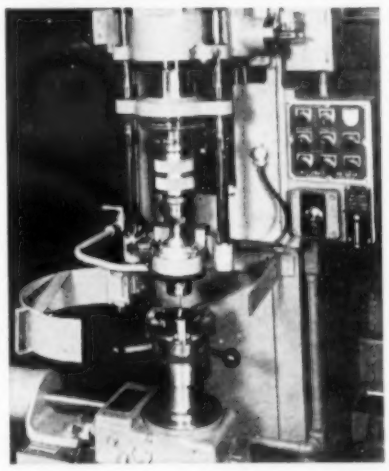
FRACTIONAL HORSEPOWER MOTORS for industrial applications

Conforming fully to NEMA standards for 56-frame motors, Hy-Drive fractional horsepower motors are designed for powering pumps, machine tools, farm

equipment, air conditioners, industrial fans and blowers. They have ribbed base, 11-gage steel frame, cast iron end shields, Mylar insulation and improved ventilating design. Motors are available in split-phase, capacitor-start and polyphase types in ¼ to 1-hp ratings. Mechanical styles include dripproof designs with ball and sleeve bearings and rigid, resilient or face mountings; totally-enclosed ball bearing rigid mounted types; face-mounted ball bearing units, either dripproof or totally-enclosed and suitable for vertical or horizontal installation. Made by **Hoover Co.**, Electric Motor Div., 68 Brook Ave., North Plainfield, N. J.

▲ For more details circle **NED-424 E5** on enclosed inquiry slip ▲

SPLINE HONING MACHINE bearing surfaces of splines are concentric with pitch of teeth



Among broad range of honing operations which can be performed on the model 728 Hydrohoner is spline honing of hardened gears. Bearing surfaces of the splines are generated concentric with the pitch of the teeth and the resulting finish will not pick up and gall the shaft.

Stone about half as wide as the spline is swept across the spline as the tool is reciprocated, with the part indexed periodically to get full surface coverage by all stones. Typical application calls for honing of forged steel with 58 to 60 Rockwell C hardness. From 0.002 to 0.006-in. stock is removed, with out-of-roundness and taper held to less than 0.0003-in. Finish is 15 to 20 microinches rms. Cycle time is 35 to 40 seconds per gear. Made by **Micromatic Hone Corp.**, 8102 Schoolcraft Ave., Detroit 4, Mich.

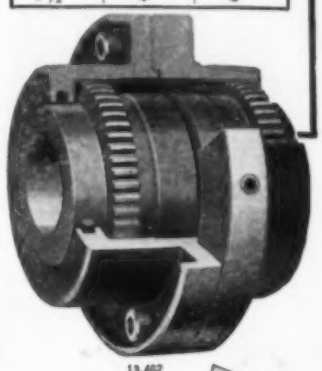
▲ For more details circle **NED-425 E5** on enclosed inquiry slip ▲

Now you can choose a smaller, lighter, lower-cost coupling

New LINK-BELT Geared Flexible Couplings have greater bore capacity than other makes

Approx. outside dia. (in.)	Max. bore of Link-Belt coupling (in.)	Largest bore available in most leading makes (in.)
4-9/16	1½	1⅜
6	2⅛	1½
7	2¾	2
8⅜	3½	2½
9½	4	3

With no sacrifice of load capacity, the new Link-Belt Geared Flexible Coupling is designed to accommodate a larger shaft for a given outside diameter. That means you can often apply it where radial clearances are too close for other makes. What's more, the Link-Belt design provides for parallel and angular misalignment with minimum backlash. Get all the facts from your Link-Belt sales office or distributor. Or write for Folder 2375 to Link-Belt Company, 220 S. Belmont Ave., Indianapolis 6, Ind.



13,462

LINK-BELT
GEARED FLEXIBLE COUPLINGS

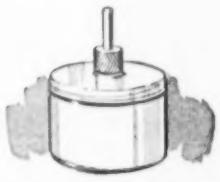
▲ For more details circle **NED-426 E5** on enclosed inquiry slip ▲

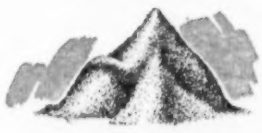
You name it- MOYNO® pumps it!

Foods
Potato salad, chow mein, peas, cream-style corn, tomatoes, molasses, chocolate.

Chemicals
Caustics, acids, dyes, petroleum solvents, soaps, sludges, latex, synthetic resins.

Pastes
Paper coating, starch, seam paste, size, adhesive dope, heavy grease, graphite sludge.





Abrasives
Insulator clay, frit, ground glass and water, porcelain glaze and enamel, cement, plaster.

R&M Moyno pumps handle almost anything that will pass through a pipe. Whether your problem is one of materials, maintenance, accurate metering, or flow, chances are the Moyno is the pump you are looking for.

The Moyno is a different kind of pump. A screw-like rotor turning in a double-threaded stator creates cavities that progress toward the discharge end of the pump, carrying the material being handled without churning, foaming, or crushing. Industrial Moynos are available with capacities up to 250 gpm; pressures up to 600 psi. Small Moynos are designed for washers, sprayers, drink dispensers, etc.

Tell us your pumping problem; let's see if the Moyno can help you solve it.

Get details. Mail the coupon, or write us.

ROBBINS & MYERS, INC.
Springfield, Ohio • Brantford, Ontario

MAIL THIS COUPON FOR INFORMATIVE BULLETIN

Robbins & Myers, Inc., Springfield, Ohio
Please send me free bulletin on Moyno pumps. ND-55

My problem is pumping _____
Name _____
Firm _____
Address _____
City _____ State _____

▲ For more details circle **NED-427 E5** on enclosed inquiry slip ▲

WORLD'S LARGEST DIE FILER is 8' 5" high, occupies 93 sq. ft. of floor space, yet it's a quick, trouble-free fastening job with Industrial Rivets. Operators can set as many as 25 a minute—up, down or across—in blind spots or open seams!

How the DoALL Co. Prevented a Fastening Headache
with Du Pont Industrial Rivets

The world's largest die filer was on the drawing boards. Next step at DoALL (Des Plaines, Ill.): choosing a fastener to join 10-gauge aluminum skin to the shell.

And what a fastening job *that* is! *Most* sections are blind—*others* can be fastened from inside, but it'd be tough going—*all* must be tight-set to resist vibration. Of all fasteners tested, only one—Du Pont Industrial Rivets—had the combination of speed, ease of setting and strength this potential headache demands.

No fastening bottlenecks. DoALL shopmen drill holes, insert Rivets, apply heated iron—it's simple as that! In ½ second Rivets expand, lock in place. You work *only from head* side—can set up to 25 a minute with no after finishing needed. And these rugged, one-piece Rivets really stay put!

Try problem-solving Industrial Rivets soon. For full details, contact your jobber or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT
BETTER THINGS FOR BETTER LIVING THROUGH CHEMISTRY

DU PONT *Hi-Speed* **INDUSTRIAL RIVETS**
A Product of Du Pont Explosives Research

▲ For more details circle **NED-423 E5** on enclosed inquiry slip ▲

L-W SWIVEL BASE MILLING MACHINE VISES

STRONG ACCURATE LOW PRICED

Ideal for drill press and shaper work

High-grade semi-steel castings. Hardened steel sliding jaws with full length bearing on a ground bar and machined ways. The 4½" and 6½" sizes have a large Acme steel screw with replaceable bronze nut. Four bolt and key slots for rigidly attaching to table so the work-holding surfaces are at true right angles or parallel to the table.

HUSKY $24.00
Jaws 3" wide, 1" deep. Opens 2" with jaws. Wt. 16 lbs.

JUNIOR $40.22
Jaws 4½" wide, 1½" deep. Opens 3" with jaws, 3½" without. Wt. boxed 40 lbs.

MASTER $60.03
Jaws 6½" wide, 2" deep. Opens 4" with jaws, 5¼" without. Wt. boxed 85 lbs.

Immediate delivery. Order from your industrial supply distributor or order direct, giving name of your distributor.

Send for complete catalog giving prices and specifications on these quality, low-cost L-W Products

L-W CHUCK COMPANY 51 SO. ST. CLAIR ST. TOLEDO 4, OHIO

▲ For more details circle NED-428 E5 on enclosed inquiry slip ▲

ME? AN AIRCRAFT ENGINEER

Yes, Lockheed trains you...at full pay

The step up to Aircraft Engineering isn't as steep as you might expect.

Aircraft experience isn't necessary. Lockheed takes your knowledge of engineering principles, your experience in other engineering fields, your aptitude and trains you for aircraft work through a program adapted to the individual.

Part of the program includes on-the-job training. When necessary you attend Lockheed classes. You learn to work with closer tolerances. You become more weight conscious. Because Lockheed's diversified expansion program ranges across the entire spectrum of aeronautical endeavor, you learn that fresh thinking, new ideas are welcomed and rewarded.

Naturally, you receive full pay while training, as well as a wide range of extra employee benefits which add approximately 14% to your salary in the form of insurance, retirement pension, etc. These opportunities for engineers in all fields have been created by Lockheed's long-range development program. Projects include: turbo-jet and turbo-prop transports; supersonic fighters far exceeding present-day aircraft in performance; advanced versions of vertical rising aircraft, jet trainers and bombers; nuclear energy applications to aircraft; and a large number of significant classified projects.

From a career standpoint, it is significant that a large measure of Lockheed's development program involves commercial aircraft.

Equally important from a living standpoint is the better life you lead in Southern California. Year-round sunshine, varied cultural and recreational opportunities, and scenic beauty of San Fernando valley provide the ideal background for modern living. You are invited to write for a brochure describing life and work at Lockheed and a job application blank. Coupon below is for your convenience.

Mr. E. W. Des Lauriers, Dept. D-20-5
Lockheed Aircraft Corporation
1708 Empire Avenue, Burbank, California

LOCKHEED AIRCRAFT CORPORATION
BURBANK, CALIFORNIA

Dear Sir: Please send me your brochure describing life and work at Lockheed in Southern California.

My name

My present field of engineering

My street address My city and state

▲ For more details circle NED-429 E5 on enclosed inquiry slip ▲

PHOTOCOPY MACHINE
makes copies in 30 to 40 seconds

Legally acceptable copies of documents and papers can be produced in from 30 to 40 seconds by Copease photocopy machines, which will be manufactured in this country under agreement with the German patent holder. Improvements made in previously announced model (*NED, Feb.* '54) include a Lite-Visor which permits production of copies under any lighting conditions, and a roller transport system. Improvements can be installed on existing machines. Copies made are fadeproof. Machines and licenses for their manufacture are available from **Copease Mfg. Co.,** Dept. N, 270 Park Ave., New York, N. Y.

▲ For more details circle NED-430 E5 on enclosed inquiry slip ▲

DIMENSIONAL GAGE
for production, small lot checking

With an accuracy of ±1 per cent over its entire scale range, the No. 500-502 Mikrokator gage can be used for accurate measuring in mass production and in checking individual parts. It is made in three different designs in both inch and millimeter graduations. Accessories include a fixed and an adjustable back and various lengths of measuring points. A setting ring facilitates setting to zero. Instrument has two adjustable tolerance points that are easily mounted and removed. Measuring pressure is about 3½ oz and weight of instrument is 6½ oz. Available from **C. E. Johansson Gage Co.,** 10641 Haggerty, Dearborn 1, Mich.

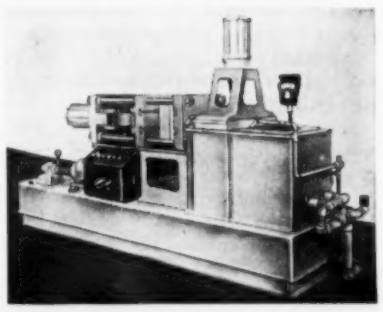
▲ For more details circle NED-431 E5 on enclosed inquiry slip ▲

ELECTRONIC CHOPPER
1.6-oz unit has no moving parts

This electronic chopper, identified as model 307, is capable of modulating direct current to frequencies up to 400 cps, for a maximum life period of 3000 hours. Modulation is accomplished by illumination of photoconductive element in a typical voltage divider. Features include temperature insensitive operation over range of −50 to 100° C; direct-to-alternating-current conversion ratio of over 0.5; noise pickup of less than 200 mu v rms; and 115-v, 3-ma, alternating current excitation. Chopper measures ⅞ x ⅞ x 2 in. and weighs 1.6 oz. Made by **Avion Instrument Corp.,** 299-52 State Highway No. 17, Paramus, N. J.

▲ For more details circle NED-432 E5 on enclosed inquiry slip ▲

DIE CASTING MACHINE
handles 2½-lb shot at high speed



Shot capacities up to 2½ lb can be handled by this low cost, high speed die casting machine of all steel welded construction. Features include 80-ton locking pressure, automatic electric cycling at up to 700 shots per hour, 17¾ x 17¾-in. die platens, 6½-in. die stroke, blast type furnace blower and moving platens supported by bronze carrier shoes. Controls and valves are mounted for accessibility. Unit is available in air or hydraulically-operated plunger gooseneck type for zinc, tin and lead, or cold chamber type for aluminum, brass and magnesium. Made by **American Die Casting Machinery Co.,** Dept. NED, 1516 W. Thomas St., Chicago 22, Ill.

▲ For more details circle NED-433 E5 on enclosed inquiry slip ▲

BOOST 100 PSI AIR PRESSURE TO 30,000 PSI FLUID PRESSURE

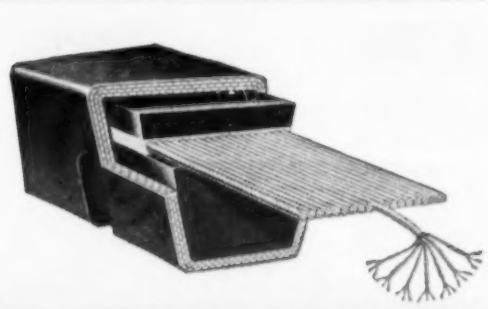
for... **$289.50** (F.O.B. Gardena, Calif.)

Continuous-acting, air-driven. Various ratios give maximum fluid pressures of 100 to 50,000 psi. Size: 8¼" wide x 9⅝" deep.

Eight standard models. Special models for lower or higher pressures. Applicable wherever low-volume output at high pressures is the requirement, such as static testing, powering presses for forming, shearing, clamping, etc. Thousands in use. Complete power packages also available. Send for Bulletins.

SPRAGUE *Engineering Corporation*
1144 WEST 135th STREET, GARDENA, CALIFORNIA

▲ For more details circle NED-434 E5 on enclosed inquiry slip ▲



where clearances limit the number of v-belts *specify* ***"SURE-GRIP"*** **steel cable v-belts**

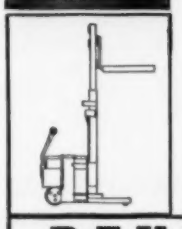
The number of grooves on the face of the sheave, of course, is determined by the number of belts to be used, which, in turn is determined by the HP required. In drives where clearances limit the width of the sheave face, fewer belts must be used, yet be able to withstand the same loads and speeds. Here's where "Sure-Grip" steel cable V-Belts come in.

These belts have higher HP rating due to continuous steel cables that provide super strength, practically zero stretch. Strength member lies in a single plane thus insuring long flex life. Available in A, B, C and D cross sections for medium center, heavy duty drives. For further information write for Bulletin 394.

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PA.

CAMBRIDGE, MASS., NEWARK, N. J., CLEVELAND, OHIO

▲ For more details circle NED-435 E5 on enclosed inquiry slip ▲



REVOLVATOR GO-GETTER Lift Efficiency

Door-To-Door Warehouse Handling Efficiency

For the efficient flow of goods within and without a plant—from production to storage—to shipping—there is no lift truck on the market today that surpasses the Revolvator Go-Getter line.

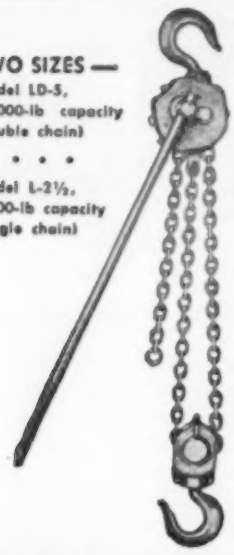
Illustrated above is the high lift model Go-Getter—a favorite of the food producers—accepted throughout all industry. In 2000-3000 lb. capacities—remarkably adept in narrow aisle work, the Revolvator Go-Getter high lift truck permits great economies in warehousing.

Write for the full facts today.

REVOLVATOR CO.
8732 Tonnele Ave. North Bergen, N. J.

▲ For more details circle NED-436 E5 on enclosed inquiry slip ▲

TWO SIZES —
Model LD-5, 10,000-lb capacity (double chain)
• • •
Model L-2½, 5,000-lb capacity (single chain)



New . . . Different . . . Better

COFFING Super Power

COIL CHAIN RATCHET LEVER HOIST

For over two years the entire production of Coffing's new Super Power Hoist has gone into military service. Now it is available to bring new standards of ratchet hoist performance to civilian users. Here are just a few advantages the new hoist offers:

TOUGH for safety and dependability
Every load-holding ratchet is tested at 30,000 lb. "Drop Test" spot checks hoists under 40,000-lb impact load.

SIMPLE in design
May be completely disassembled in the field.

CONVENIENT to use
Handle length is adjustable . . . may be operated from either side of hoist. Needs only 70-lb pull to lift 10,000-lb load.
For full information write for bulletin X5L.

Coffing Hoist Division
Duff-Norton Company
Danville, Illinois

Originators of the Ratchet Lever Hoist

▲ For more details circle NED-437 E5 on enclosed inquiry slip ▲

in doubt about

limit switches?

find out about

SNAP-LOCK
TRADE MARK

National Acme SNAP-LOCK Limit Switches are designed and built to stand up under the heaviest service that rugged, precision operated machine tools (often demanding more than 400 contacts a minute) or other modern machine design can place upon them.

Records prove SNAP-LOCKS dependable for more than 15,000,000 contacts . . . perhaps the best reason why they have been adopted as standard switch equipment by 4 out of 5 builders of heavy duty machine tools.

If *you* are looking for limit switches you can install and forget, let us work with you in designing these trouble-free SNAP-LOCK switches into your equipment.

WRITE FOR BULLETIN EM-51. It shows various types of Snap-Lock switches available—including water-resistant and special purpose. Lists design features, specifications, wiring diagrams, ordering data. Also shows other National Acme electrical components and controls that may improve your product.

ELECTRICAL MANUFACTURING DIVISION
THE NATIONAL ACME COMPANY
182 East 131st Street, Cleveland 8, Ohio

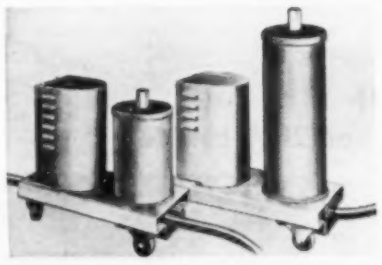
▲ For more details circle NED-438 E5 on enclosed inquiry slip ▲

FOLDING HANDLE has three positions

Portable electronic equipment, drawers, flat cases and rack-mounted units requiring compactness can be fitted with this type X2062 three-position folding handle. Nickel plated, it has spring-loaded detents which allow the grip to lie flat against the object to which it is attached or to pull out for pulling or carrying. It is 4⅝ in. wide and ⅜-in. diameter and hand clearance is 1 13/16 in. Made by **Cambridge Thermionic Corp.**, 472 Concord Ave., Cambridge 38, Mass.

▲ For more details circle NED-439 E5 on enclosed inquiry slip ▲

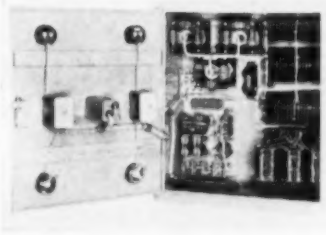
CHEMICAL SOLUTION FILTER is portable power-operated unit



Clarifying of alkaline plating solutions and other alkaline type liquids, coolants and lubricants is accomplished readily with this cLEAn - FLO filter. Economy model will handle 100 to 150 gal of activated carbon-treated solution between tube changes, while standard model handles 500 to 1000 gal. Integral Moyno pump delivers up to 800 gph at zero back pressure and up to 600 gph against 50-psi back pressure. Motor is rated ½-hp on 115/230-v ac. Made by **Lea Mfg. Co.**, 16-A Cherry Ave., Waterbury 20, Conn.

▲ For more details circle NED-440 E5 on enclosed inquiry slip ▲

VOLTAGE REGULATOR is magnetic amplifier type



Usable with engine driven alternators, motor-generator sets, inverters and variable frequency generators, line of magnetic amplifier type voltage regulators requires no warm-up time. They cover alternator ranges from 100 w to 100 kw at 50, 60, 400 and 800 cycles and variable frequencies of 50 to 70, 350 to 450 and 300 to 1000 cycles. Regulation is within 0.5-per cent from no load to full load with response time of 0.1, 0.2 or 0.3-second. Made by **Mag-Electric Products, Inc.**, Dept. STS, 12822 Yukon Ave., Hawthorne, Calif.

▲ For more details circle NED-441 E5 on enclosed inquiry slip ▲

May We Serve You?

You will find our experience in WHEEL IMPROVEMENT a treasure store for you in your search for MOBILITY at its BEST. We offer you —

DESIGN of WHEELS and HUBS
DESIGN of SPINDLES and AXLES
SELECTION of Adequate BEARINGS
SELECTION of Suitable Closure SEALS
SELECTION of Sizes, Types, Rubber TIRES

— in ONE Engineered Package

Our PACKAGE PLAN can save you Research, Development, Tooling Costs. We Invite Your Inquiries.

INTEGRATED ENGINEERING — WHEEL BUILDERS for AGRICULTURE & INDUSTRY — Since 1888

FRENCH & HECHT
DIVISION
KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA

▲ For more details circle NED-442 E5 on enclosed inquiry slip ▲

FREE BROCHURE TELLS HOW TO GET MORE EFFICIENT OVEN OPERATION

There *is* something new and better in heat processing ovens. In baking, drying, curing, and pre-heating operations leading manufacturers are utilizing the greater efficiencies of Jensen PAN-L-HEAT Ovens. They are cutting finishing operation costs through boosted production and slashed maintenance costs. This newly revised brochure tells how and why.

As you go through it you'll learn of the many, patented construction principles that make these advantages possible. Learn how you can reverse your finishing cost curve. Send for this informative 16-page brochure today.

YOUR PLANT CAN HAVE
- Increased pay load realization.
- More effective use of electric heat.
- Uniform, high quality production.
- Superior results with shorter heating cycles—at lower energy consumption.

Jensen SPECIALTIES, INC.
9354 Freeland, Detroit 28, Michigan

▲ For more details circle NED-443 E5 on enclosed inquiry slip ▲

We'll Send You This Wholesale Catalog FREE!

Harry Alter's DEPENDABOOK No. 162
REFRIGERATION PARTS AND SUPPLIES
plus Electric-Motors and Parts, Air Conditioning

There are over 10,000 items illustrated, described and rock-bottom priced in our newest DEPENDABOOK. So — get and use this money-saver. Write for your copy to

The HARRY ALTER CO., Inc.
1728 S. Michigan Ave., Chicago 16, Ill.
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122 Parkhouse Street, Dallas 7, Texas

Wholesale Only
"Harry Alter gives you snappy service"

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NEW

High Temperature ANTI-SEIZE Compound

Eliminates Seizing and Galling.....

"John Crane" High Temperature Thred-Gard protects threaded surfaces against the welding action caused by extreme heat. Studs, bolts, etc., can be easily disconnected, even after prolonged service at temperatures to 1200° F. . . . greatly reduces dismantling time—permits the re-use of threaded connectors many times over.

Assembly-wise, Thred-Gard decreases wrench torque . . . allows connections to be drawn up to a greater degree of tightness without undue stress or strain.

Test Thred-Gard on your application at our expense. Send for sample and literature. Crane Packing Co., 1811 Cuyler Ave., Chicago 13, Illinois. *In Canada: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.*

JOHN CRANE **CRANE PACKING COMPANY**

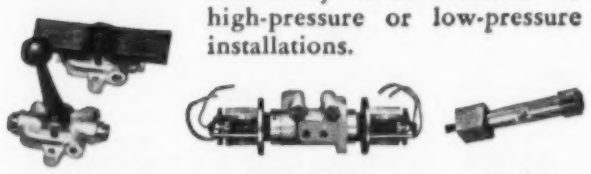
▲ For more details circle NED-445 E5 on enclosed inquiry slip ▲

FOR AUTOMATIC CIRCUIT-CONTROL

AIRMATIC VALVES

To meet the increasing demand for fully automatic or semi-automatic operations . . . eliminate the need for manual control. Airmatic Valves perform efficiently . . . maintain greater operating speeds. What's more, they are simple and compact in design—assure best arrangement.

A complete line of 2-way, 3-way and 4-way valves available for high-pressure or low-pressure installations.



Three-Way Valve Solenoid Valves Cylinders

Write today for complete details about Airmatic Products

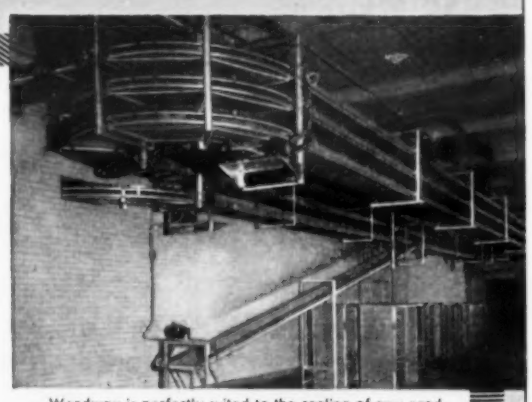
Attractive O. E. M. and Quantity Discounts *Delivery from Stock —Immediate*

AIRMATIC VALVE INC.
7317 Associate St. Cleveland, Ohio

▲ For more details circle **NED-446 E5** on enclosed inquiry slip ▲

USP **WENDWAY**

LIGHT PRODUCT CONVEYORS



Wendway is perfectly suited to the cooling of raw products, packages or containers. This "spiral" system travels the cooling products at ceiling height to conserve valuable floor space.

Cut Handling Costs!

Wendway is the modern, light product conveying system that delivers your product to any place you want it . . . smoothly and silently. Through the wall, upstairs or down, all around the plant. Wendway turns corners, goes down the assembly, packing or shipping room line, or back again, in single file or multiple tiers, runs fast or slow, or switch tracks to another part of the plant. Wendway is really *versatile!* And . . . Wendway saves you money in space, handling costs, convenience and time. It's trouble-free and easy to maintain. Investigate the many Wendway advantages for light product conveying, then see for yourself the many places you could benefit through Wendway's versatility.

This simple, single-tier Wendway system is used to convey fancy packaged nuts from bag loaders through a series of stapling machines and then onto boxing stations.

As fresh sliced cold meat travel by on the Wendway conveying system, the operator labels each type as they proceed to the automatic package wrapping machine.

A typical package conveyor installation, this three-tier Wendway system extends the full length of the shipping dock and carries a steady flow of packages to the waiting trucks.

WRITE TODAY

Gentlemen:—
Please send me complete information about Wendway Conveyor systems as they apply to _____
Name _____
Company _____
Street _____
City _____ Zone ____ State _____
Have a USP Conveyor Engineer contact me at once ☐

UNION STEEL PRODUCTS CO.
ALBION, MICHIGAN

▲ For more details circle **NED-447 E5** on enclosed inquiry slip ▲

AUTOMATIC STOCK REEL
for up to 6-in. wide resilient stock

Powered by natural spring of uncoiling stock, this low cost automatic stock reel operates without need for adjustments or outside power. Loop of stock between the coil and the press feed eliminates slippage, kickback and overrun. Stock is supplied at any speed established by the feed. Three sizes have 24, 30 and 36-in. platens and will operate with any resilient stock up to 6 in. wide. Made by **Jaco Devices, Inc.**, 95 High St., Hingham, Mass.

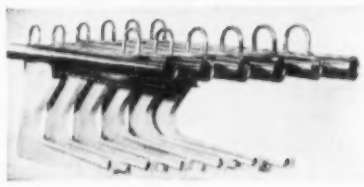
▲ For more details circle **NED-448 E5** on enclosed inquiry slip ▲

HIGH-BAY LAMP
750-w bulb has 2000-hr life

Plants having high bay areas can be illuminated by the 750-R-52 mogul screw base lamp designed for operation on 230-250 v electrical systems. Similar to the 500-w high voltage R-52 lamp, this 750-w model collects little dust and dirt on its bottom surface through which light is emitted. Overall length is 11¾ in., life is 2000 hr and burning position is base up. Made by **General Electric Co.**, Lamp Div., Dept. 166-NED, Nela Park, Cleveland 12, O.

▲ For more details circle **NED-449 E5** on enclosed inquiry slip ▲

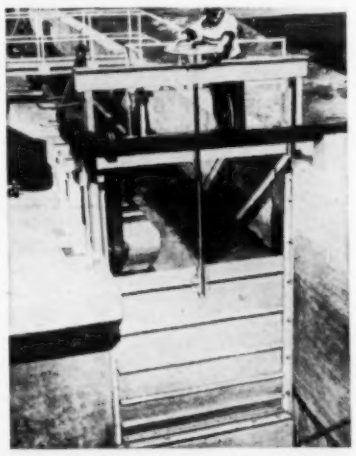
MONEL PICKLING HOOKS
have drip trough on load bar



Acid-resisting Monel hooks for use in pickling operations are welded, hairpin-type hooks which feature drip trough on load bar that picks up condensate and carries it out beyond rod bundles. Hooks are offered in two types and six standard sizes. Those with I-section construction are intended for maximum loads up to 3000 lb, while box-section type hooks are for loads up to 6000 lb. Latter type can be furnished in virtually any capacity. Hooks are bolted to steel spreader bars which can be replaced quickly. For extremely corrosive pickling, special one-piece welded hooks and spreader bars of Monel can be supplied. Made by **Lewis Welding & Engineering Corp.**, 14 Interstate St., Bedford, O.

▲ For more details circle **NED-450 E5** on enclosed inquiry slip ▲

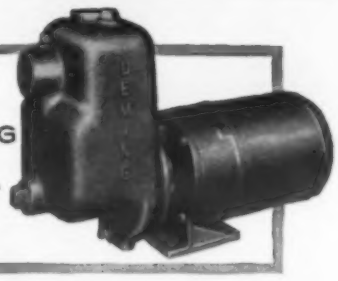
ALUMINUM SLIDE GATE
for by-pass channels, has full flow



Easily installed slide gate made of sheet aluminum reinforced with extruded aluminum angles functions as an economical stop-gate for by-pass channels. Only a simple frame is required for installation. Gate is controlled by manually - operated bench-stand hoist with control stem. In normal flow, it is corrosion-resistant. Use of slide gate is recommended when odd channel sizes are present in design, full channel flow is desirable and where closure can be made under balanced conditions. Made by **Rodney Hunt Machine Co.**, Dept. B, Orange, Mass.

▲ For more details circle **NED-451 E5** on enclosed inquiry slip ▲

VERSATILE SELF-PRIMING CENTRIFUGAL PUMP



The DEMING "Motor-Mount"

Deming Fig. 3350 "Motor-Mount" Centrifugal Pumps are rapid priming, automatic and foolproof. Units are available in sizes from ½ through 5 horsepower. Capacities range from 10 to 140 gallons per minute. Services include air conditioning, swimming pools, lawn sprinkling, irrigation and general industrial use. Impeller is all-bronze, semi-open type, accurately machined and balanced. Mechanical shaft seal (rotary type) prevents leakage along shaft. Stainless steel shaft is ground and polished. Resists scoring, pitting and corrosion. Support head is accurately machined with centering fits for connecting to motor flanged ends.

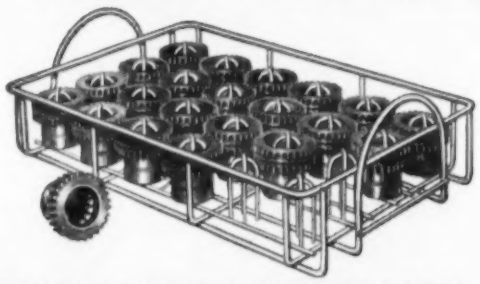
75th ANNIVERSARY DEMING PUMPS 1880 • 1955

SEND FOR BULLETIN 3350
This bulletin includes performance tables at 3,500 R.P.M.; approximate dimensions of Fig. 3350 and related data.

THE DEMING COMPANY
520 Broadway • Salem, Ohio

▲ For more details circle **NED-452 E5** on enclosed inquiry slip ▲

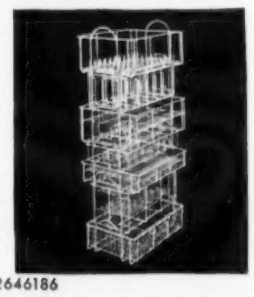
EEZY-STAK BASKETS
for Better Parts Handling



EEZY-STAK BASKETS SIMPLIFY PARTS HANDLING...CUT COSTS...REDUCE REJECTS!

WIPCO manufactures a complete line of Custom-Designed stacking (Eezy-Stak) and non-stacking baskets for handling all types of parts through every production and assembly process. WIPCO baskets can be made in any desired size or shape, and from any practical material.

Eezy-Stak baskets feature the exclusive Interlock Handle* which permits easy and safe stacking. Eezy-Staks are available in a wide range of standard sizes and metals which fit most parts-handling requirements. Write today for Bulletin B-54.



*Pat. No. 2646186

WIPCO BASKETS... *FROM INITIAL MACHINING TO FINAL ASSEMBLY AND SHIPPING*

WIRE AND IRON PRODUCTS INC.
1727 SIXTEENTH ST. • DETROIT 16, MICHIGAN

▲ For more details circle **NED-453 E5** on enclosed inquiry slip ▲

FREE BRUSH GUIDE. *Write for a copy of the handy, pocket-sized Osborn Brush Guide.*

How to help painters cut your costs

FOR lower-cost painting, why not help those who can help you most—the painters? By specifying Osborn, the top-quality brushes in the industrial field, you will help painters save costly manhours. You get best results when you give your men the best tools available. *The Osborn Manufacturing Company, Dept. Z-24, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

Osborn Brushes

OSBORN BRUSHING METHODS • POWER, PAINT AND MAINTENANCE BRUSHES
BRUSHING MACHINES • FOUNDRY MOLDING MACHINES

▲ For more details circle **NED-454 E5** on enclosed inquiry slip ▲

Cut out needless re-roping costs

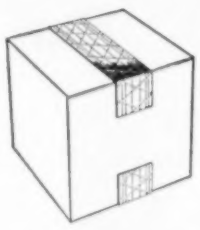
USE ELECTROLINE WIRE ROPE FITTINGS

In minutes, ordinary labor can install Electroline fittings that will hang on for all time. Prolong wire rope life by damping vibration stresses thus eliminating wire rope fatigue at the fitting. Write for Electroline Catalog. It points out many savings—no cost.

Electroline Company
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

For more details circle NED-455 E5 on enclosed inquiry slip

The SNAKE TAPE Idea



. . use 2 strips only!

NOW ACCEPTABLE for Rail Shipments under U.F.C. Rule 41

IT'S 2/3 FASTER because you seal only the two center seams!

IT'S 35% STRONGER because *reinforced* Snake Tape has strap-like strength. *Strength* you'll find in no other gummed tape because it's reinforced with *rayon* yarns . . . the same rayon yarns used in the best auto tires for superior shock absorbence.

PROVE TO YOURSELF, and at our expense, how much you can save in sealing time and in damage claims. Send for FREE sample of Angier Snake Tape now.

Free - 15 yd. sample

ANGIER CORPORATION • Framingham 30, Mass.

For more details circle NED-456 E5 on enclosed inquiry slip

CULLMAN ROLLER CHAINS for POWER transmission efficiency

Precise • Efficient Dependable

In the design stages consider these basic power transmission factors . . . cost, efficiency, flexibility, load distribution, space, strength, fixed speed ratios . . . And then remember that each and every link of Cullman Roller Chain is manufactured to exacting standards that answer these problems . . . *and many more.*

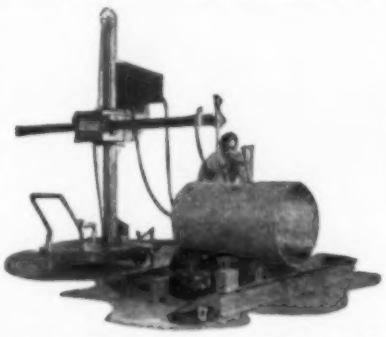
By writing today, you can obtain information that will help you solve your power transmission problems. Cullman offers the services of its qualified engineers and field men to help you in every way.

CULLMAN power transmission
ROLLER CHAINS and SPROCKETS
REPRESENTATIVES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES
CULLMAN WHEEL COMPANY • 1333 ALTGELD ST. • CHICAGO 14, ILL.

For more details circle NED-457 E5 on enclosed inquiry slip

WELDING HEAD MANIPULATOR converts semiautomatic submerged melt weld head into productive tool

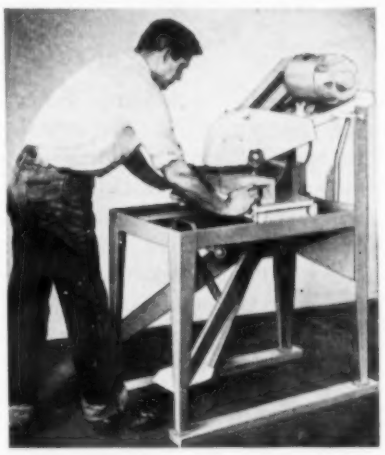
Refinements made in the SAM Semi-Automatic Manipulator for a submerged-melt welding head include greater weight and compactness, and mounting of boom and control cabinet on single column. New semicircular base has three jacks for raising entire unit off floor, or leveling as required. Micrometer screw adjustment permits raising and lowering head by hand, turning it to 45-degree angle for fillet welding and guiding it along irregular seams.



Unit is available with either hand or power lift for raising weld tip to an arc height of 8 ft. Horizontal arc travel is also 8 ft. Welding speeds from 0 to 120 ipm are made possible by fully reversible, infinitely variable speed motor drive. The versatile unit can make horizontal or circumferential welds inside or outside tank, weld at floor level or work on weldments positioned by welding work positioner. Entire unit is vibration-free. Made by **Pandjiris Weldment Co.,** 5155 Northrup Ave., St. Louis 10, Mo.

For more details circle NED-458 E5 on enclosed inquiry slip

MASONRY SAW 1½-hp model has 14-in. blade



Three improvements have been incorporated in this Di - Met masonry saw. Blade - Saver collars distribute water over each side of blade and eject it under centrifugal force from a series of ports to assure fast, clean cutting. Ball bearing spindle has series of slingers to prevent entrance of water. Quill is easily removed by loosening two set screws. Removable head can be lifted to any usable height by foot pedal control. When saw is used for diamond cutting, head is locked instantly by lever action. Cart is mounted on ball bearings for smooth straight-line travel. Adjustable blade guard exposes only as much blade as is needed for the cut. Either abrasive or diamond 14-in. blades are driven by a 1½-hp 110/220-v ac motor. Made by **Felker Mfg. Co.,** 1125 Border Ave., Torrance, Calif.

For more details circle NED-459 E5 on enclosed inquiry slip

NOW! Boost Output and Quality of Plastic Film and Sheet

New Sarcotrol Unit automatically maintains uniform roll temperatures

Temperature variations across the faces of water-jacketed cylinders . . . so often the cause of production slow-downs because of product imperfections . . . can now be completely eliminated with this new Sarcotrol Heating and Cooling Unit.

By recirculating temperature-controlled water through roll jackets at high velocity, Sarcotrol maintains an even temperature across the entire face of the roll. You can increase production and AT THE SAME TIME MAINTAIN QUALITY.

Sarcotrol Heating and Cooling Unit available with 1, 2 or 3 independent circulating water systems.

Operation is simple and entirely automatic. One knob changes temperature control setting. Controlled temperature is continuously indicated on easy-to-read dial.

Write today for Case History 154 describing how a leading plastics firm increased production after installing a Sarcotrol on chill rolls. 2093F

SARCO COMPANY, INC.
Empire State Bldg., N.Y. 1, N.Y.

For more details circle NED-460 E5 on enclosed inquiry slip

new method of **process heating** and **cooling**

***saves 50%**

- * in initial cost
- * in heating and cooling time
- * in tank space
- * in maintenance labor

Each member of your buying committee should have this book which tells how Platecoils satisfactorily solve tank heating and cooling problems . . . and at the same time save time, money and manpower.

PLATECOIL® REPLACES PIPE COILS

Write for your free copy of Bulletin P57 today!

TRANTER MANUFACTURING, inc., LANSING 4, MICH.

For more details circle NED-461 E5 on enclosed inquiry slip

This Magnetic Counter

Adds and Subtracts

Added Evidence that — Everyone Can Count on **VEEDER-ROOT**

Flip the switch up . . . the counter adds. Flip it down . . . it *subtracts.* And this 2-way countability makes this new counter a distinct asset to modern systems of automation, control engineering and stock control. Readily adaptable, easily installed and connected to existing circuits, the Veeder-Root "plus or minus" counter is a reliable double-check on the operation of machines, processes, systems.

VEEDER-ROOT INC. Hartford 2, Conn.

For more details circle NED-462 E5 on enclosed inquiry slip

Just a single stroke!...

CUTS ROUND RODS ⅛" to ⅞" on a

MARVEL ROD CUTTER

Available in three models:

No. 5	⅛	3/16	¼	5/16	3/8
No. 6	3/8	7/16	½	9/16	5/8
No. 7	3/8	½	5/8	¾	7/8

These are bench models, but the No. 7 MARVEL Rod Cutter can be furnished mounted on legs. See your Industrial Distributor or write us for literature and prices.

ARMSTRONG-BLUM MFG. CO.
5700 W. Bloomingdale Ave. • Chicago 39, U.S.A.
Manufacturers of the outstanding MARVEL Metal Saws.

For more details circle NED-463 E5 on enclosed inquiry slip

Order USG® BRUSHES because...

- Years of practical experience in all types of applications assure you of the proper USG brush for your equipment.
- Controlled manufacturing uniformity gives you the same brush every time you order.
- There is a USG representative near your plant. See him or write for your copy of the USG Brush Catalog B49 today.

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION
SAGINAW, MICHIGAN
198-A

▲ For more details circle NED-464 E5 on enclosed inquiry slip ▲

ELCO SCREWS

ELCO SCREWS ARE GOOD SCREWS

WOOD SCREWS
MACHINE SCREWS
MACHINE SCREW NUTS
TAPPING SCREWS
THREAD-CUTTING SCREWS
PHILLIPS AND SEMS SCREWS
PIPE PLUGS
STOVE BOLTS
CAP SCREWS
LAG SCREWS
DRIVE SCREWS
SPECIAL SCREWS
COLD HEADED PRODUCTS

ELCO TOOL AND SCREW CORPORATION
1946 BROADWAY • ROCKFORD, ILLINOIS

▲ For more details circle NED-465 E5 on enclosed inquiry slip ▲

ELECTRIC TRUCK HOIST
handles 1000 lb at 4 ft radius

Four-foot boom of the model 1000 Hoist-O-Matic electric truck crane swings 360 degrees and revolves on hardened steel rollers and a thrust bearing plate. It is 6 ft high, pushbutton operated and can be used anywhere within a radius 4 ft, lifting up to 1000 lb. Automatic brake instantly stops load at any height. Complete power unit is mounted in the base of the crane which requires a mounting space of 18 x 23 in. anywhere on the truck bed. Power is furnished by the truck battery. Cable length is 50 ft. Made by **Hoisters, Inc.**, Dept. NED, 1913 Broadway, Kansas City, Mo.

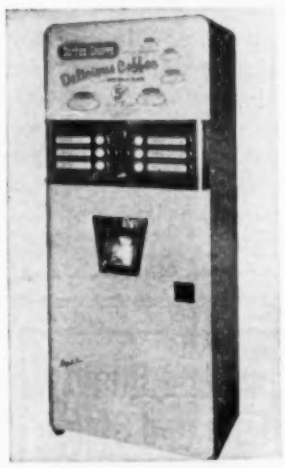
▲ For more details circle NED-466 E5 on enclosed inquiry slip ▲

HIGH-WATTAGE RHEOSTATS
ratings from 225 to 1000 w

Spring feature in contact arm provides these high - wattage rheostats with automatic adjustment of brush pressure over the entire contact area of the winding. Rated at 225, 300, 500, 750 and 1000 w, they incorporate high strength, corrosion resistant alloy terminals, high temperature enamel, a tripod mounting frame and "bus bar" brush construction which affords minimum resistance to collector ring. Rheostats conform to current standards of military specification MIL-R-22, RETMA, NEMA and Underwriters' Laboratories. All five models are available in wide rating ranges. Made by **Hardwick, Hindle, Inc.**, 38 Hermon St., Newark 5, N. J.

▲ For more details circle NED-467 E5 on enclosed inquiry slip ▲

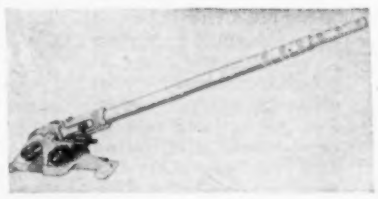
COFFEE DISPENSER
for industrial plants, offices



Only dry ingredients are used for coffee, cream, sugar and chocolate in the CoffeeShoppe coffee and hot chocolate vending machine for plants and offices. It vends coffee black, black with sugar, with cream only, with cream and sugar and with cream and double sugar, as well as hot chocolate. Capacity is 720 cups, 1250 coffee ingredients and 750 hot chocolate ingredients. A CoffeeShoppe Junior model with 300-cup capacity is also available. Machines are installed, serviced and maintained free of charge, with a percentage of the return paid to the plant owner or an employee's fund. Franchises offered by **Apco, Inc.**, 1740A Broadway, New York 19, N. Y.

▲ For more details circle NED-468 E5 on enclosed inquiry slip ▲

STRAPPING STRETCHER
for 2-in. flat steel strap



Free-wheeling feature of the tension drum on the model 48 flat steel strapping stretcher makes for easy threading. It accommodates 2 x 0.050-in. strapping. Additional features are tension handle for repositioning, frame gripper locking in open position for ease of threading and easy removal of the stretcher from strap after completion of the tie. An extension handle provides added leverage in tensioning when necessary. Made by **United States Steel Corp.**, Gerrard Steel Strapping Div., 4721 S. Richmond St., Chicago 32, Ill.

▲ For more details circle NED-469 E5 on enclosed inquiry slip ▲

INSPECT HARD-TO-SEE AREAS

FAST... ACCURATELY

New Multi-Purpose G-S ILLUMINATION KIT

Accuracy of production and inspection is increased . . . work is speeded and simplified . . . precise measurements of small, difficult-to-reach areas are easily determined when you use the new G-S Syte-Ayde.

Powered by ordinary pen-size flashlight batteries, the Syte-Ayde is equipped with 4 light-transmitting rods. Two are straight, 3½" and 6" long, and two, of the same lengths, are bent to 90 degrees. Three 1½ power mirrors, ½", ¾", and 1" in diameter, are supplied to fit rod ends. Complete in plastic case.

2 KITS COMPLETE: $10.00
ORDER SYTE-AYDE DIRECT SAMPLE: $5.50 POSTPAID

GENERAL SCIENTIFIC EQUIPMENT CO.
GENERAL SAFETY EQUIPMENT
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.
SAFETY EQUIPMENT FOR EVERY HAZARD
OPEN ACCOUNTS INVITED

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DERBY "152"

A DERBY FIRST
Stainless steel cut-off blade, guaranteed for life of machine.

MOST TALKED ABOUT GUMMED TAPE DISPENSER ON THE MARKET!

Derby spent 2 years designing, building and testing the fabulous Super "152". It's a rugged, efficient, gummed tape dispenser with so many big machine features, so many unusual Derby exclusives, that its low price is truly sensational! Dispenses 1" to 3" width tapes in predetermined lengths up to 30".

See your dealer or write Dept. NED

DERBY SEALERS INC. Derby, Conn.

▲ For more details circle NED-471 E5 on enclosed inquiry slip ▲

HOW TO CUT BELOW-ROOF HEAT 13° to 26° Immediately!

Brush or spray on Tropical Roof Coolerant and *feel* the difference at once! This non-staining, bright metallic coating reflects up to 70% radiant heat away from the roof, cuts below-roof temperature up to 26° to give hot-weather comfort. Anyone can apply Tropical Roof Coolerant quickly, easily, at low cost. Do it NOW!

LENGTHENS ROOF LIFE, TOO!

Bright, seamless Roof Coolerant metallic shield prevents drying action of summer heat, keeps roof flexible, prevents cracks and leaks. Adds years to roof life!

FREE! Complete information, literature, on Tropical Roof Coolerant for comfort and roof protection THIS SUMMER. Write today!

TROPICAL PAINT COMPANY
1124-1278 W. 70th • Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883

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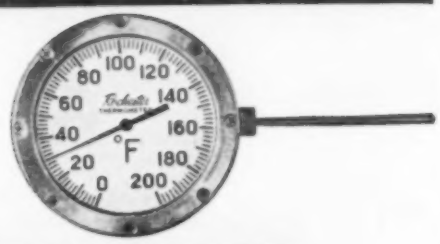
For THERMOMETERS that are DURABLE, ACCURATE, ADJUSTABLE



USE

ROCHESTER Dial Thermometers

Hermetically sealed against moisture and dirt to bring you years of trouble free service.

Recalibrate the dial externally by inserting the stem in liquid of known temperature and adjusting screw attachment.

Designed to be used indoors or out, the stainless steel case is impervious to most corrosive agents.

Rochester Straight-Form Thermometers bring you the added advantage of a stem that can be mounted in any position around the dial.

For additional information contact your Rochester sales engineer or write:

Rochester MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

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METZGAR LIVE ROLLER Conveyors

PACE-SET YOUR PRODUCTION SPEED

STANDARD WIDTHS 11½" — 15" — 18" — 24". LENGTHS TO SUIT REQUIREMENTS

Work can be held momentarily for adjustment or inspection without cutting main drive. May be used on slight incline or decline. An extremely versatile power conveyor when fitted to your needs.

BEST *for*

- Moving sharp-cornered and rough edged items
- Power unit in gravity line
- Production line work movement
- Handling heated and heat treated items

• WRITE FOR DETAILS •

for LOWER COST HIGHER PRODUCTION

METZGAR CONVEYOR CO.

416 Douglas St., N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

▲ For more details circle NED-474 E5 on enclosed inquiry slip ▲

the Simplest way to Measure **SPEED** *and Study* **MOTION**

Type 631-BL Strobotac® $150.00

Thousands of persons are using the G-R STROBOTAC® to make speed measurements and to see fast-moving equipment operate in s-l-o-w motion. With this compact, portable, lightweight and accurate electronic tachometer, anyone can measure speed from 200 to 100,000 rpm; the exact mechanical operation of high-speed gears, belts, cams and hundreds of other moving parts can be observed as though the equipment were running as slow as a fraction of an rpm!

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GENERAL RADIO Company

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920 South Michigan Ave. CHICAGO 5 1000 North Seward St. LOS ANGELES 38

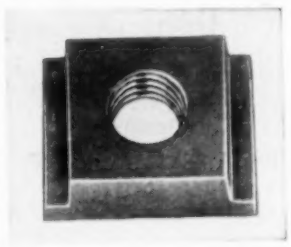
▲ For more details circle NED-475 E5 on enclosed inquiry slip ▲

OUTDOOR INCINERATOR capacity is 12 bushels

Safe outdoor refuse disposal is provided by model CP industrial incinerator. It has a 12-bushel capacity and will burn damp, green or dry refuse without emitting burning scraps and with a minimum of smoke and smell. Unit is made of aluminum-bonded steel which renders it rust resistant under all climatic conditions. It is 5 ft high and 36 in. square at the base. Top lifts off the 10-in. high ash pit. Made by **Alsto Co.**, Dept. NED, 4007 Detroit Ave., Cleveland 13, O.

▲ For more details circle NED-476 E5 on enclosed inquiry slip ▲

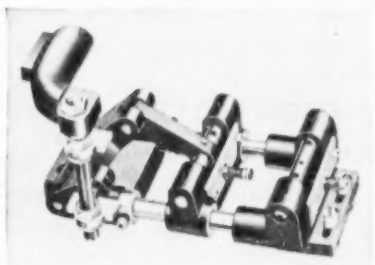
CLINCH NUT made to close tolerances



Suitable for automation of production operations, line of low cost clinch nuts is made to close tolerances for precise applications. All machine screw sizes from No. 6 to ⅜-in. are available. Made by **Jacobson Nut Mfg. Corp.**, Dept. N, Kenilworth, N. J.

▲ For more details circle NED-477 E5 on enclosed inquiry slip ▲

PRESS HITCH FEED handles stock widths up to 3 in.



Wear parts of this automatic Surefeed hitch feed are made of hardened and ground tool steel to assure long performance. Unit handles stock widths up to 3 in. and stock thicknesses of 0.005 to 0.055-in. It can be mounted on die set so that the two units can be handled as one. No press or feed alterations are required when mounting in any ordinary press. Only two drive plates and simple linkage, controlled by movement of press, are used to advance the stock. Feed length for presses having 1-in. stroke is 0.000 to ⅞-in.; for presses having 1½-in. or greater strokes, 0.000 to 3 in. Made by **Producto Machine Co.**, 965 Housatonic Ave., Bridgeport 1, Conn.

▲ For more details circle NED-478 E5 on enclosed inquiry slip ▲

A Sound Investment **FOR PROTECTION OF PERSONNEL!**

WELDING CURTAINS

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of flameproof canvas (Underwriter's Approved Treatment) or asbestos, complete with eyelets for suspending on rod or pipe support.

WRITE FOR BULLETIN NO. 43

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

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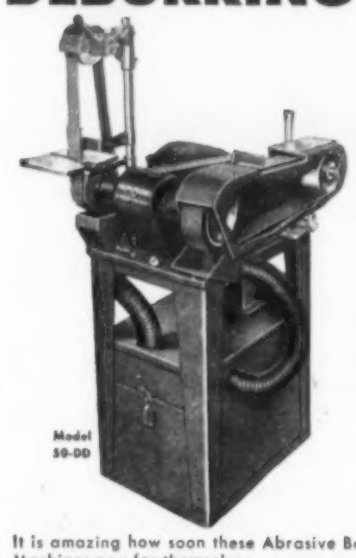
Hammond of KALAMAZOO FOR **DEBURRING**



Model 50-DD

It is amazing how soon these Abrasive Belt Machines pay for themselves.

11 combinations available with or without Duskolector.

"Clip" this ad to your letterhead. 20 page catalog will be sent at once.

Hammond Machinery Builders

1623 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

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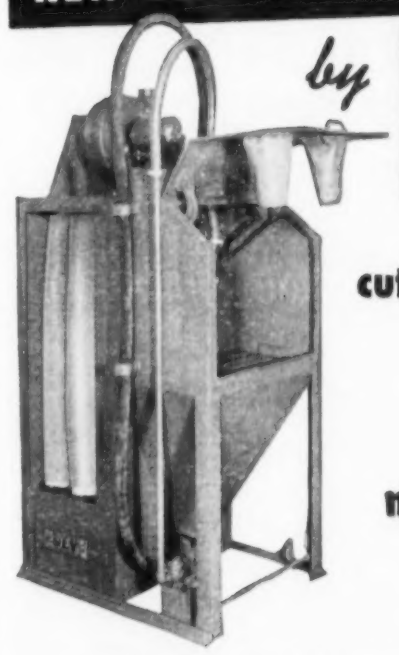
NEW BLAST-FILTER COMBO *by* **SLY**



cuts cleaning costs of small metal parts

Combining a blast cabinet and dust collector in minimum space, the Sly Blast-Filter Combo offers advantages never before obtainable in cleaning small metal parts (both ferrous and non-ferrous), in machine shops, tool and die shops and other places. It can be adapted also to soft grit blasting.

Designed to fit against a wall or in a corner, this unit has a work area 18" x 30" and requires a floor space only slightly larger. The height of the work area has been planned for greatest efficiency. The unit is easily accessible from two sides. The easy-lift overhead door requires no additional space. Automatic spring assures positive action. Operation is simple and easy by a spring treadle — a slight pressure of the foot starts it; lifting of foot stops it.

The Blast-Filter Combo has an integral, suction cloth-type dust collector. The illustration (with inspection door removed) shows the filter and its easy access. An outstanding feature is filter cleaning of air before reaching the fan thereby protecting the fan from wear. The dust hopper is available by merely unfastening five wing nuts.

Write for further information and prices.

Dust Control Systems, Blast Cleaning Equipment, Tumbling Mills, Industrial Ovens.

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4748 TRAIN AVENUE • CLEVELAND 2, OHIO

Branches in:
New York • Chicago • Philadelphia • Rochester
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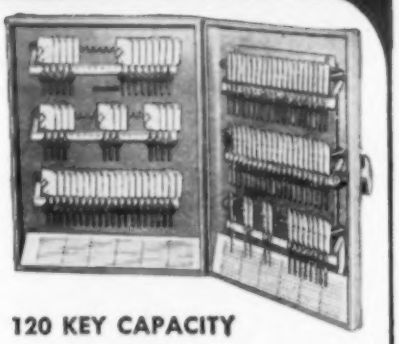
HUNTING FOR KEYS



120 KEY CAPACITY

Here's real "key insurance" in a compact KE-CABINET. Made of 20 gauge cold rolled steel with suitable hardware to provide maximum key security. Equipped with numbered KE-TAGS of durable, vulcanized fibre. KE-CABINETS come in two sizes to hold 60 to 120 keys and 100 to 200 keys. The cabinet is finished in modern office grey.

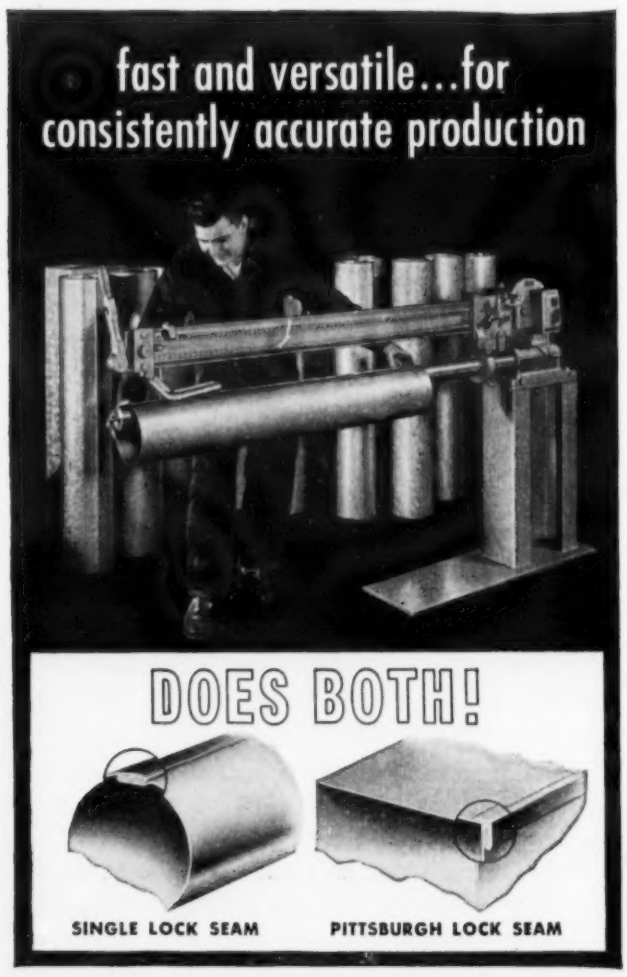
For further information write
CUSHMAN & DENISON MFG. CO.
153 West 23rd St., New York 11, N. Y.

KE-CABINET

▲ For more details circle NED-482 E5 on enclosed inquiry slip ▲

NEW!
NIAGARA UNIVERSAL POWER GROOVER

fast and versatile...for consistently accurate production



Do more jobs — better work — in less time — at less cost with the Model 48-U Groover (48" nominal working length). Can be equipped to close single lock seams or Pittsburgh lock seams or both — an original Niagara feature. Power driven with convenient controls, it increases operator efficiency, gives fast, smooth operation and eliminates the noise, delays and uncertainties of hand tools.

GET THE FACTS

about this new machine and other Niagara grooving and seaming equipment. Write for illustrated Bulletin 76B today. It will be sent *free* . . . promptly.

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DISTRICT OFFICES:
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Dealers in principal U.S. cities and major foreign countries

NIAGARA

America's Most Complete Line of Presses, Shears, Machines and Tools for Plate and Sheet Metal Work

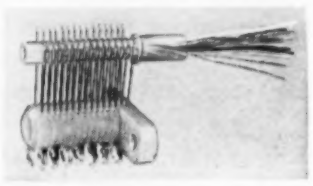
▲ For more details circle NED-483 E5 on enclosed inquiry slip ▲

SCOOP ATTACHMENT
for fork truck, handles sand, coal

Such bulk materials as chemicals, sand and coal can be handled in operations that require accurate measuring and batch weighing by this hydraulic dump bucket scoop attachment. Scoop is quickly detachable and can be easily interchanged with stand forks on any SpaceMaster electric fork trucks. Capacity of scoop can be either 5 or 10 cu ft. Double-acting hydraulic cylinder allows controlled dumping. Scoop tilts up 10 degrees to hold material and tilts down 40 degrees for dumping. Controls are located in operator's compartment. Photo shows scoop on 2000-lb capacity model J fork truck picking up load of sand. Made by **Lewis-Shepard Products, Inc.**, Dept. R-6, Watertown 72, Mass.

▲ For more details circle NED-484 E5 on enclosed inquiry slip ▲

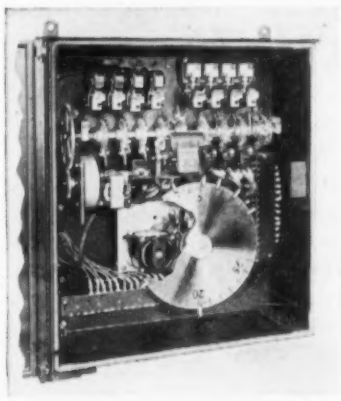
SLIP RING & BRUSH ASSEMBLIES
transmit energy to rotating elements



Miniature slip ring and brush assemblies matched to specific project requirements are designed to transmit electrical energy to and from rotating elements in various kinds of electro-mechanical devices. Computers, telemeters and other types of electronic control and indicating systems are typical uses. Assemblies are particularly suitable for gyroscope application where low friction and high precision are required. Made by **Iron Fireman Mfg. Co.**, Electronics Div., 2839 S.E. Ninth Ave., Portland, Oreg.

▲ For more details circle NED-485 E5 on enclosed inquiry slip ▲

TIMED-PROGRAM CONTROLLER
adjustable to desired intervals



Direct time settings on large easily-read time dial and pins set at corresponding intervals adapt this Flex-O-Timer for precise timing and coordination of batch processes. Instrument automatically initiates and stops successive steps in a stop-and-go sequence from beginning to end of the process. It consists of a motor driven time-measuring device and an independently driven step disk mechanism controlling the operation of from one to eight electric or pneumatically operated functions. Each function can be carried through an aggregate of 20 on-and-off steps. Developed by **Taylor Instrument Cos.**, 53 Ames St., Rochester 1, N. Y.

▲ For more details circle NED-486 E5 on enclosed inquiry slip ▲

ALUMINUM-MAGNESIUM HAMMER
handle cast integral with head

Because it features a 13 per cent elasticity factor, this aluminum-magnesium Hefty-Hammer will not chip or shear and can be dressed over and over again.

Breakage and fracturing when positioning heavy dies, driving gear arbors, or opening and closing jigs are eliminated by strength and flexibility built into the tool through integral casting. Handle can actually be bent double without breaking. Dimpled finger grips and positioning of center of gravity for balance are added features. Made by **Little Beaver Industries**, Dept. N, 38809 Mentor Ave., Willoughby, O.

▲ For more details circle NED-487 E5 on enclosed inquiry slip ▲

SUBMINIATURE RELAYS
To Specification MIL-R-5757B

Mounting Styles To Meet All Your Requirements

The Smallest 6PDT Subminiature Relay Available Today!

Filtors, Inc. is a major supplier of subminiature 6-pole and 4-pole relays. Our facilities are now utilized 100% for the development and production of relays of the highest quality.

OUTSTANDING FEATURES

1. COMPACT
2. RUGGED
3. LIGHTWEIGHT
4. ROTARY MOTOR
5. LONG LIFE

Also available in LATCHING construction, electrical reset, in contact arrangements up to and including 4PDT.

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FILTORS, INC. 32 Sagamore Hill Drive Port Washington, L. I., N. Y.

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You'll Vote For

X KLEENSLOT WEDGE WIRE SCREEN

Everytime

The ideal screen for dewatering, sizing and cleaning operations. They can be adapted to fit any make of vibrator. You do not have to change your present machine to accommodate KLEENSLOT screens. They are of quality construction and their rigidity and method of installation prevents "whipping."

Complete literature is available and will be promptly sent to you if you request it on your company's stationery.

Kleenslot
This trade mark shows the non-clogging, non-blinding principle.

Wedge-Wire CORPORATION
GAS STREET AT NICKLE PLATE R. R., WELLINGTON, OHIO

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useful data for you

American's

REVISED CATALOG 450 of Broaches, Broaching Machines and Broaching applications

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- Typical broaching applications
- Broach design data
- Typical broach sections
- Broach maintenance
- Broach pull head types
- Basic machine types
- Standard keyway broach chart

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American BROACH & MACHINE CO.
A DIVISION OF SUNDSTRAND MACHINE TOOL CO.
ANN ARBOR, MICHIGAN

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JIB CRANES

FASTER HANDLING *at less cost*

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- Complete Line of Pillar, Mast and Wall Type Jib Cranes

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OVER HEAD CRANES • STAK-RAK CRANES
MONORAIL SYSTEMS AND RACKS

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Lightweight **HELIARC TORCH** *is water-cooled...*

FOR EFFICIENT INERT GAS WELDING AT LOW COST

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

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For more details circle NED-492 E5 on enclosed inquiry slip

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for *FREE* book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

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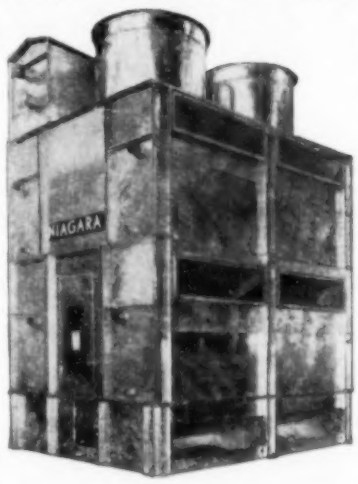
RETRIEVING TOOL in 12, 15, 18 and 24-in. lengths

Small metallic or nonmetallic objects that have fallen into an oil pan or other hard-to-reach place can be retrieved with the Pro-to Grap-All tool. When cap at top of tool is pressed, a cable that passes through flexible outer casing pushes four grippers out at bottom. These spring steel grippers expand outward for grabbing objects of various sizes. Spring between cap and finger bar pulls cable back into casing, closing grippers onto the object. Offered in 12, 15, 18 and 24-in. lengths, tool is handy for electrical equipment repair, instrument board assembly, precision work on objects too small to hold in the hand and for reaching items in a hot oven. Made by **Plomb Tool Co.**, Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

For more details circle NED-494 E5 on enclosed inquiry slip

AMMONIA CONDENSER unit measures 8½ x 14 x 16 ft and has 200-ton refrigeration capacity

Operating principle of this 200-ton capacity refrigeration ammonia condenser consists of evaporating sprayed water from surface of condensing coils through which refrigerant gas passes. Heat is extracted at rate of 1000 Btu per pound of water evaporated. Air stream enters at top of condensing section, is drawn downward through water sprays, over condensing coils, then turns upward to leave unit through propeller-type fans at top. Spray water falls into tank at base of unit, from which it is recirculated.



Unit has Duo-Pass precooling coil which removes superheat from refrigerant gas before it enters sprayed, condensing section. This avoids precipitation of scale deposits. In gas line, between precooler and condensing coil, is located the Oil-Out at which point oil vapor is condensed and is easily removed from refrigerant. Unit measures 8½ x 14 x 16 ft. Made by **Niagara Blower Co.**, Dept. E.D., 405 Lexington Ave., New York 17, N. Y.

For more details circle NED-495 E5 on enclosed inquiry slip

specify standard

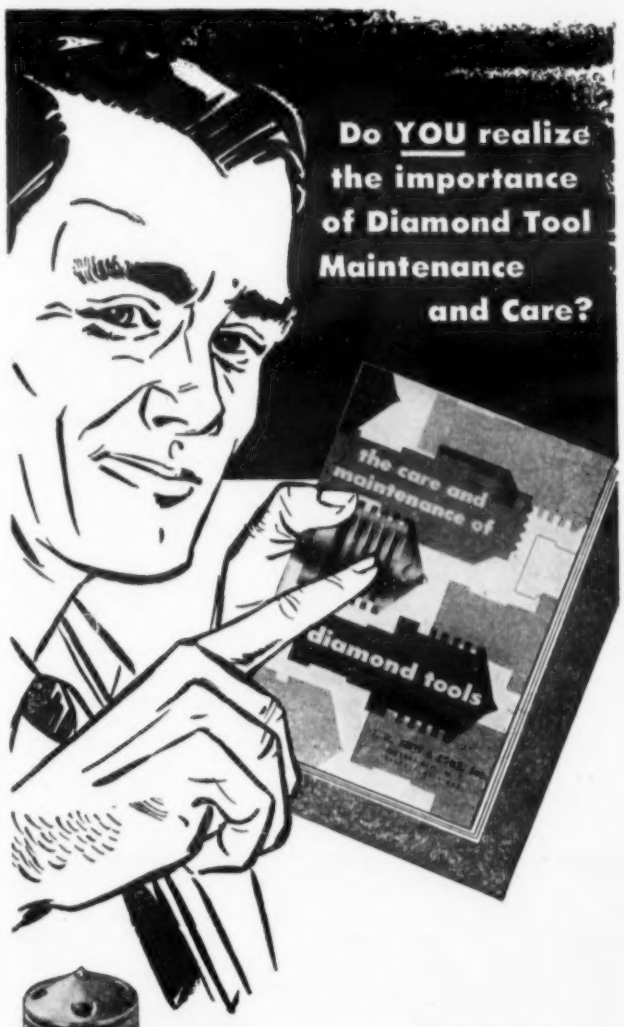
UNBRAKO® SHOULDER SCREWS

Use them in tool and die work. Use them in assembly. These heat-treated alloy steel screws have knurled heads for sure finger grip and fast assembly; accurate hex sockets for positive nonslip internal wrenching. Shoulders are held to extremely fine tolerances, and finished threads run close up for maximum holding power. Standard sizes—¼" to ¾" in a full range of body lengths—are stocked by authorized industrial distributors. Write for Bulletin 877. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

UNBRAKO SOCKET SCREW DIVISION **SPS**
JENKINTOWN PENNSYLVANIA

For more details circle NED-496 E5 on enclosed inquiry slip

For more details circle NED-497 E5 on enclosed inquiry slip



Stakool Model

Cluster Model

Sure, we want to sell you Diamond Tools! However, we also feel there is a definite need of knowledge as to how to take care of the Diamond Tools you already own. That's why we have compiled, edited and printed a booklet which will help you with your diamond tool care and maintenance problems. It's yours for the asking. Merely write for your copy of "The Care and Maintenance of Diamond Tools."

And—when you're again ready to replace wornout tools and if you require engineering advice on industrial diamond products, consult J. K. Smit & Sons . . . We've been in this business since 1888.

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HOME OFFICE AND PLANT
MURRAY HILL NEW JERSEY
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Our line of small induction motors is designed for applications where small power can be converted to considerable torque at slow output shaft speed. Hundreds of thousands are in use today for operating relays, vending, amusement, coin operated machines, motion displays, combination rotisserie and broilers, etc.

These motors are made in three basic sizes—speeds from 1 to 200 r.p.m. with proportional torque from 5 to 500 in. ounces. Write today for descriptive information, prices and data sheet.

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1600 JUNCTION AVENUE
RACINE, WISCONSIN

Designers and Manufacturers of
SPECIAL INDUCTION MOTORS

For more details circle NED-499 E5 on enclosed inquiry slip

TRICO America's Finest
AUTOMATIC OILERS Repay Their Cost MANY TIMES OVER

- Productive man-power is released for other, more profitable duties.
- Down-time for "trust-to-luck," wasteful hand oiling is eliminated.
- Costly bearing failures are reduced to a minimum.
- Machine life is greatly prolonged.

Eliminate old, wasteful and dangerous "Trust-to-luck", daily hand oiling methods. . . . One filling of TRICO Oilers lasts a long time and provides perfect constant bearing protection at all times. Switch to TRICO Oilers now . . . They are quickly and easily installed. There's a type and size for most every application.

WRITE FOR FREE OILER CATALOG

Speed Up Fuse Replacement with TRICO

FUSE PULLERS

Prevent burns, shocks, serious infection and compensation costs. Also handy for adjusting switch and fuse clips. Every electrician should carry one . . . Hang one at every fuse box.

Write For Free Bulletin No. 5

TRICO FUSE MFG. CO. MILWAUKEE, WIS.

For more details circle NED-500 E5 on enclosed inquiry slip

"Best in the long run" WENDT-SONIS CARBIDE TOOLS

Wendt-Sonis carbide tools . . . produce higher finishes . . . allow faster feeds and speeds . . . and stay sharp longer. That's because they are made of the finest shank steel and the most uniformly high grade carbide, expertly designed and assembled for highest quality.

Try Wendt-Sonis carbide tools and learn how Wendt-Sonis quality makes them *"Best in the long run."*

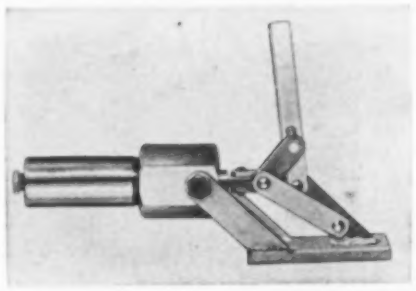
Your local distributor has a complete line of Wendt-Sonis carbide tipped round and single point tools, blanks and inserts.

Write Dept. NE-.5 for literature, prices and the name of your nearest distributor.

WENDT-SONIS
Hannibal, Missouri • Rogers, Arkansas

For more details circle NED-501 E5 on enclosed inquiry slip

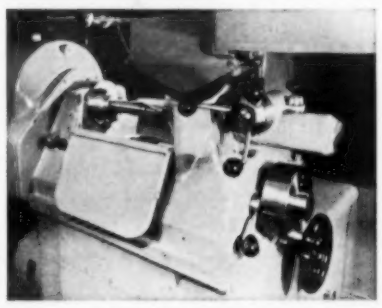
TOGGLE CLAMP
air or oil-operated



Stationary welding fixtures or places where manual clamping is employed are applications of the Triple-E air or oil - operated toggle clamp. It can be used individually or in multiples in locations that might be inaccessible for operating a manually operated clamp. Cylinder and clamp are an integral unit, with hardened bushings used at the pivot points. End covers, tube and piston are brass with rubber O-rings. Self-adjusting neoprene U-cup piston seals on piston and piston rod. Stroke is 3 in. Made by **E & E Engineering, Inc.**, 15023 Harper Ave., Detroit 24, Mich.

For more details circle NED-502 E5 on enclosed inquiry slip

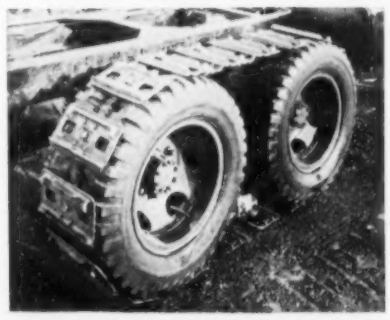
PRECISION GEAR GRINDER
is automatic machine tool



Usable in aviation and power transmission industries, this precision gear grinder is fully automatic. Tooling is designed into machine, eliminating need for special tooling. When a new gear is to be ground, dial is set to index number corresponding to the tooth involute shape, three change gears are replaced for the proper number of teeth in the gear, and a wheel dressing cam is inserted. Complete set-up is accomplished in less than an hour. Machine will handle ¾ to 7½-in. pitch diameter gears and all diametral pitches from 32 to 4. Price, including accessories, is $27,000. Made by **Belock Instrument Corp.**, Dept. G, 14-34 112th St., College Point, N. Y.

For more details circle NED-503 E5 on enclosed inquiry slip

TRUCK TIRE TRACKS
for single and tandem axles



Trucks, tractors, cranes and other rubber-tired heavy equipment can be given mobility through mud, snow, sand and other "rough going" areas with installation of truck tire tracks. They fit most tires, are easily mounted and provide up to 500 per cent greater flotation than tires alone. Tracks are supplied in standard size of 15 in. for single and tandem axles. Heavy duty 18-in. tracks are available for many larger size tires. Available from **P & G Supply Co.**, Dept. NED, 2262 N. Albina St., Portland 12, Oreg.

For more details circle NED-504 E5 on enclosed inquiry slip

BARREL FINISHING MACHINE
all moving parts are enclosed

All lubrication points are readily accessible on the model VS Honite barrel finishing machine as motor, speed reducer, speed changer and brake are mounted in a single unit at the rear. Moving parts are enclosed, and cylinder can be removed without disassembling the machine. It incorporates steel frame; oversize pillow blocks and self-aligning bearings capable of carrying full loads of steel burnishing media; pivot-mounted gate which closes during operation; and sufficient space under the barrel for rapid unloading. Machine is available with a 1½, 2 or 3-hp motor. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-505 E5 on enclosed inquiry slip

new! ADVANCED ENGINEERING FEATURES

announcing
A COMPLETE NEW LINE
of HONAN-CRANE
OIL FILTERS

. . . the first in a series of important engineering developments by the NEW Corporation . . . HOUDAILLE-HERSHEY OF INDIANA, INC.

Write for engineering bulletins and quotations on all three models.

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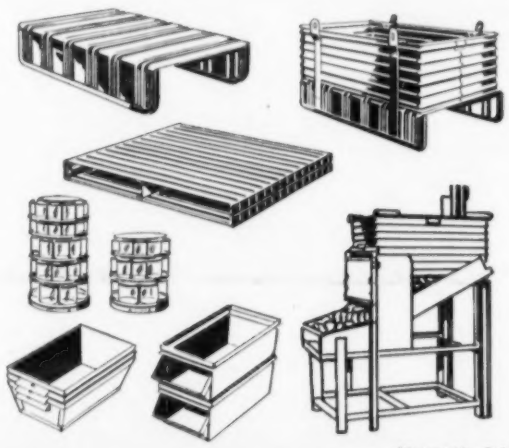
FILTRATION DIVISION

405 Wabash Avenue, Lebanon, Indiana

For more details circle NED-506 E5 on

Union Metal offers a com "family line" of material handlin



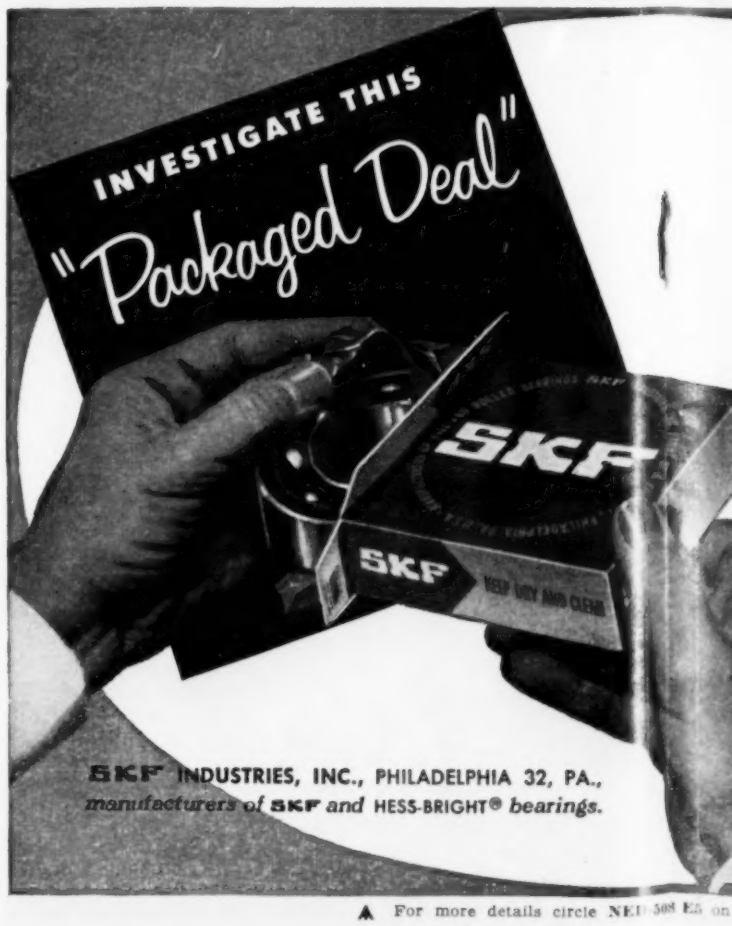
UNION METAL h slash waste time every phase of mater a type and size desig requirements perfect Detailed information platforms, boxes, sk trays, scoops, shop containers and posit time, space and mor Write today for illus industry's broadest Equipment. Address Manufacturing Com

From the smallest s production positioni

*Patent No. 2,445,038. Other patents pending.

UNION METAL
Material Handling Equipment

For more details circle NED-507 E5 on

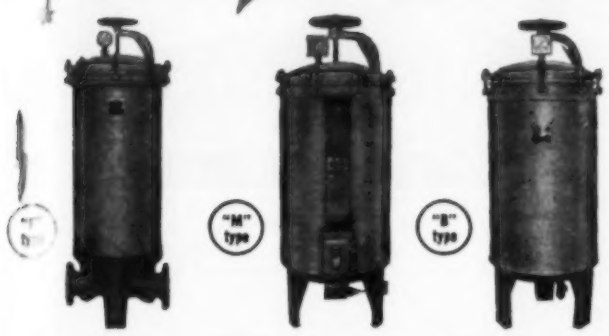


SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.,
manufacturers of SKF *and* HESS-BRIGHT® *bearings.*

For more details circle NED-508 E5 on

new! EXTRA-HIGH FLOW RATES

new! QUICK-OPENING LIDS



FULL FLOW—For in-line installation at high flow rates—25 to 800 GPM. Uses new "FLO-PAC" pleated paper cartridge to remove particles down to one micron.

MULTI-CARTRIDGE—11 sizes available. Six cartridge refills including new "FLO-PAC" and "KLEER-PAC" available for exact degree of filtration needed.

BULK REFILL—For absolutely clean oil, bulk Cranite medium provides depth purification. Bulk or cartridge type cellulose refills available for fine filtering.

NEW

All Models Have Quick-Opening Lids
Purifier lid is fastened with swing bolts which one man can loosen quickly. Lid swings back for easy access to refills.

ED-506 E5 on enclosed inquiry slip ▲

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andling containers

ON METAL heavy-duty containers
sh waste time and motion in virtually
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and size designed to meet your
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coops, shop boxes, Work-O-Matic*
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patent pending.

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REAL Service and a knowledge of bearings and bearing applications go with this package when you buy your bearings through an *Authorized* SKF Distributor.

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For you it means . . .
the right bearing in the right place.

SKF®
BALL AND ROLLER BEARINGS

NED-508 E5 on enclosed inquiry slip ▲

RAIL BOND BRAZER
mounted on lightweight rail cart

Five-inch flexible bronze cable rail bond is brazed to side of rail in a few seconds with this Tigerbraze equipment. Equipment which is mounted on lightweight cart that rides on rails or on retractable rubber tires includes Nelson welding gun, batteries and gasoline engine driven battery charger. Rail bonds consist of bronze cable with copper lugs on each end. In applying the bond, a special knock-off rail bond pin and ceramic ferrule unit is used. When gun trigger is depressed, 200-amp 36-v welding current securely silver brazes the bond to the rail. Developed in co-operation with AGA (Sweden) by Nelson Stud Welding Co. and **U. S. Steel Corp.**, American Steel & Wire Div., Rockefeller Bldg., Cleveland 13, O.

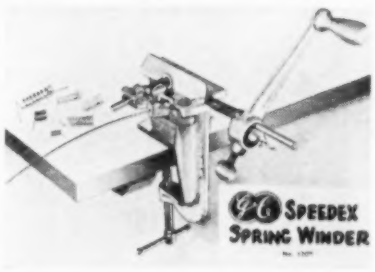
▲ For more details circle **NED-509 E5** on enclosed inquiry slip ▲

TOWEL & OILY RAG BIN
cover closes in case of fire

A practical method for disposal and storage of towels and oily waste rags is achieved with use of Safeway towel and oily rag bins. One section of bin is utilized for clean towels, while other section holds dirty towels or rags. Bins are galvanized sheet metal, tubular riveted throughout and reinforced by heavy gage galvanized angle iron. Fusible link melts in event of fire, allowing cover to close automatically. Bins are made in 20 x 36 x 33-in. and 20 x 36 x 32-in. sizes by **J. D. Polis Mfg. Co.**, 2908 W. 26th St., Chicago 23, Ill.

▲ For more details circle **NED-510 E5** on enclosed inquiry slip ▲

HAND SPRING WINDER
forms tension or compression springs



Almost any type of spring, with any number of coils and any desired pitch and diameter can be made on the Speedex spring winder, using any size wire. Easily operated tool for repair, replacement or experimental uses makes both compression and extension springs. It fastens to a bench and incorporates a screw adjustment for varying the pitch. Available for $14.95 with an assortment of spring wire from **General Cement Mfg. Co.**, Dept. NED, 919 Taylor Ave., Rockford, Ill.

▲ For more details circle **NED-511 E5** on enclosed inquiry slip ▲

ELECTRIC WATER COOLERS
in capacities from 5 to 27 gph

Five air-cooled and two water-cooled models comprise line of electric water coolers with capacities from 5 to 27 gph. Featured by most models is triple-effect cooling system in which water is precooled, flash cooled and then chilled in storage. Other improvements are dual hand and foot controls and thermostatic protection for storage system as well as for drinking water. Latter thermostat regulates temperatures over 10-degree range. Mechanical foot and hand controls work independently. Units are made of 19-gage electro-galvanized steel with baked Hammerloid finish and stainless steel top. Water cooling unit, refrigeration unit and fan motors are all sealed. Made by **Cordley & Hayes**, 457 Fourth Ave., New York 16, N. Y.

▲ For more details circle **NED-512 E5** on enclosed inquiry slip ▲

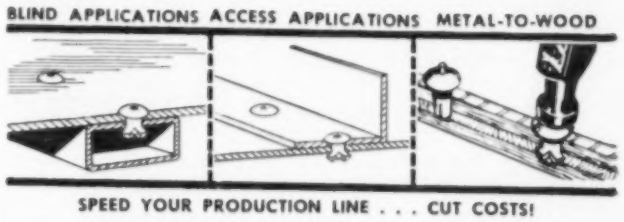
LOOK HOW EASY...
AND FAST RIVETING
CAN BE WHEN YOU USE
SOUTHCO DRIVE RIVETS!

Rivet and Mfg. Patented.

a hammer is the only tool
...drive like nails
...automatic "pull-up" action

Fastest for:

BLIND APPLICATIONS ACCESS APPLICATIONS METAL-TO-WOOD



SPEED YOUR PRODUCTION LINE . . . CUT COSTS!

For complete data, write Southco Division, South Chester Corporation, 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS

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Whenever two or more parts are fastened together.

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For faster, lower cost assembly...

You'll get big savings on assembly operations with Stackbin Assembly Bins. Work station layouts are more efficient. Parts are kept close to worker's hands . . . reaching and fumbling is eliminated. Shallow angle lip is just right for finger tip control. Operators can select with both hands. Sloping bottom feeds parts continually toward the front. With adjustable hoppers, there are always plenty of parts when and where they're needed.

Stacking feature permits rigid setups, allows flexibility when layout is changed.

Stackbin Assembly Bins feature all-welded construction with smooth, folded edges. 6 sizes with straight or tapered sides. Also available with rear-loading feature.

WRITE TODAY for full information on the Stackbin System of economical materials handling and storage.

Stackbin Corporation, 1081 Main Street, Pawtucket, R. I.

Mfgd. and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM
"Stacked and Still Accessible"

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TORIT DUST COLLECTORS

...Really draw!

A size and model to solve any dust collecting problem. Torit collectors provide complete, all-around dust control. Torit collectors are unitized for custom installation on each machine, giving power and suction only when machine is operating. Keeps plant and machines free from clogging and unsightly dust. Furthermore, cleaned and filtered air is exhausted back *into* the room maintaining heat balance. Find out now how Torit unitized dust control is engineered to your problems.

See our catalog in Sweet's Machine Tool File, or write:

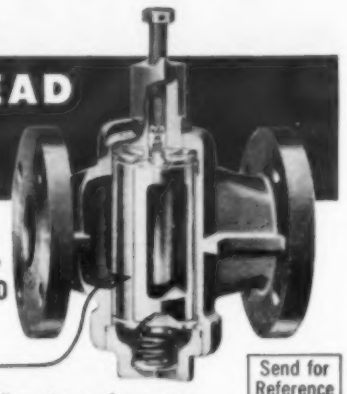
TORIT
MANUFACTURING CO.
298 Walnut St., St. Paul 2, Minn.

▲ For more details circle **NED-515 E5** on enclosed inquiry slip ▲

No. 2* of 12 REASONS WHY
YOU SHOULD BUY AND USE

LOW PRICED

HOMESTEAD *Lubricated* **PLUG VALVES**

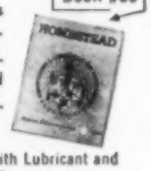


*HOMESTEAD'S EXCLUSIVE, COMPLETELY CONTROLLED HIGH-PRESSURE LUBRICANT SYSTEM

. . . forces chemical seal over all seating surfaces; prevents sticking by piston-like action of plug which moves downward, returns instantly against packing ring. Provides 100% seal; guarantees completely filled system.

This is only ONE REASON WHY you should buy and use, *low priced* HOMESTEAD LUBRICATED PLUG VALVES.

Send for Reference Book #39



HERE ARE ALL TWELVE

1. Reinforced Teflon packing ring.
2. Completely controlled high-pressure lubricant system.
3. 100% pipe area and venturi patterns.
4. No spring torsional stress.
5. No mechanical adjustments.
6. Two lubricants handle most services.
7. Extremely close tolerance between sealing surfaces.
8. Triple head-seal with Lubricant and Teflon packing ring.
9. Plug floated on Teflon washer.
10. Leak-proof double-ball and lubricant-sealed check valve.
11. Full-threaded screw assures clean lubricant.
12. Extruded lubricant shows a full protecting system.

HOMESTEAD VALVE MANUFACTURING CO.
Serving Since 1892
P. O. BOX 84 CORAOPOLIS, PA.

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IMPORTANT SAFETY for your plant!

Slip-resistant

Tri-Lok and Tri-Forged
Serrated grating and stair treads

Don't take chances in those plant areas where grease, oil or other conditions make floors slippery and dangerous! Play it safe with the non-skid, notched surface of *Tri-Lok* or *Tri-Forged* serrated grating and stair treads. Here is a walking surface that is hazard-proof and the ultimate in safety. To be sure you have complete information on all *Tri-Lok* and *Tri-Forged* products, write today.

For free catalog write Department D-2505

DRAVO CORPORATION
Pittsburgh 22, Penna.
National Distributors

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LOW COST, RUGGED *Hydraulic* **SKID TRUCKS** *for loads up to 1000 lbs!*

- ★ HYDRAULIC RAISING & LOWERING
- ★ PUSHES OR PULLS
- ★ FLOOR PROTECTIVE WHEELS
- ★ ALL STEEL WELDED CHASSIS
- ★ LIGHT WEIGHT
- ★ COVERED STEEL PLATFORM USED AS PLATFORM TRUCK

● Fully illustrated bulletin HST-19 describes this versatile truck in detail. Write for it today. Catalog GP-17 describing many standard Ironbound cost-saving units will be sent you without obligation, too.

IRONBOUND BOX & LUMBER COMPANY
55 Hoffman Place, Hillside, New Jersey

Ironbound — **IRONBOUND**

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, SKID TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

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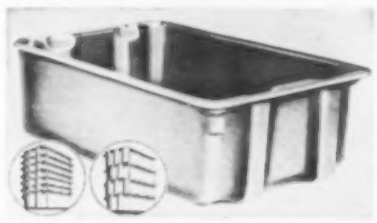
GLASS-PLASTIC TOTE PANS
can be stacked level or nested



Each end of Plexton Stack - n - Nest tote pan is formed to different contour offset so that when pans are alternated, safe, level stacking is achieved. Each pan is interlocked to its mate. By keeping like ends together, the contour offsets match and pans nest deeply. They will release readily, loaded or light. Pans are one-piece molded fiber glass-reinforced polyester and are made extra thick at stress points. They are further reinforced with steel rod imbedded in contour grip top rim. They will not dent, warp, rot or soften and can be used in tropical or Arctic temperatures without losing inherent strength. Gray, red or green molded-in colors are available. Made by **G. B. Lewis Co.**, Plexton Dept., 123 Montgomery St., Watertown, Wis.

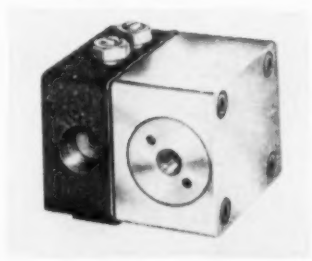
▲ For more details circle NED-519 E5 on enclosed inquiry slip ▲

FOOT SWITCH
actuated by pressure from any angle

Precision built Cadet foot switch is housed in strong steel case with unbreakable plastic cap. Nonskid sponge rubber base assures accurate positioning. Measuring only 3⅜ in. diameter by 1⅛ in. high, switch is actuated by slightest foot pressure on cap from any angle. Unit is furnished with heavy duty 6-ft 18-2SV black rubber cord set with series plug and molded strain-relief grommet. Made by **Linemaster Switch Corp.**, 432 Woodstock Terrace, Woodstock, Conn.

▲ For more details circle NED-520 E5 on enclosed inquiry slip ▲

CARTRIDGE AIR VALVES
give smooth action to air cylinders



Suitable for 5 to 150-psi service, cartridge type air valves are equipped with integral speed throttles of balanced type to give smooth hydraulic-like action to air cylinders. Speeds are easily adjusted and controlled on both forward and retract stroke. Solenoids are normally for 110-v 60-cycle operation, but other ratings as well as waterproof and explosionproof types can be supplied. Maximum coil load is 10 w. Made by **Carter Controls, Inc.**, 2876 Bernice Rd., Lansing, Ill.

▲ For more details circle NED-521 E5 on enclosed inquiry slip ▲

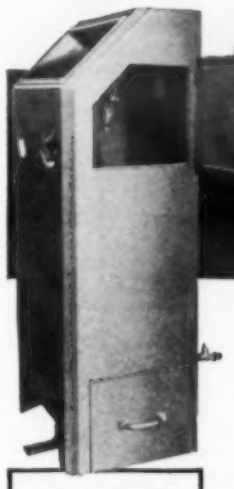
TAPE RECORDER
has three tape speeds

Pushbutton control and straight - line threading are features of the RT-75 three-speed tape recorder. Speed of 7½ in. per second has a frequency response of 30 to 12,000 cps, while speeds of 3¾ and 1⅞ in. per second have 7500 and 4500 cps maximum responses, respectively. Lowest speed provides 6 hours of dual track recording on an 1800-ft, 7-in. diameter spool. A standard 1200-ft spool of tape can be rewound in only 70 seconds, and a fast forward speed permits cueing of a similar spool in 90 seconds. Controls include volume, tone boost, and cut and recording with safety interlock which prevents accidental erasure. Inputs are provided for two microphone types and phonograph and radio. A 6 x 9-in. speaker is built in. Made by **Bell Sound Systems, Inc.**, 550-55 Marion Rd., Columbus 7, O.

▲ For more details circle NED-522 E5 on enclosed inquiry slip ▲

BIG SAVINGS!

- Cleaning and finishing metals, molds, forgings, plastics, etc.
- Removing burrs, carbon, rust, grime, paint, etc.
- Stenciling letters, designs, trademarks, etc.



Cabinet Type
LEIMAN SANDBLAST

Leiman Sandblasts provide the fast, low-cost, safe, uniform way to perform the operations listed above ...whether mass production or single pieces, large or small. Easily operated by unskilled help. Well-designed, rugged, last for years, priced right.

FEATURES: Continuous vacuum abrasive feed—heavy gauge welded steel cabinet—doors at each end—two arm holes with rubber gloves—two interior lights—foot pedal control—large viewing glass—uses all abrasives.

WRITE for folder and prices on this and many other Leiman Sandblasts

LEIMAN BROS., Inc. 139 Christie Street Newark 5, New Jersey

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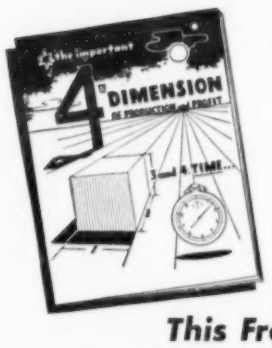
How to Maintain a High, Unbroken Rate of Production



...at 8:30 or 3:30
...Night or Day
...Summer or Winter

EVERY DAY OF THE YEAR!

This Free Booklet
shows how the *Lipe* A.M.L. BAR FEED gears machine production to the steady flow of Time!

The modern Lipe Automatic Magazine-Loading Bar Feed is a continuous-feed mechanism that utilizes every *minute* of the working day for production. *Automatic* production, that works at a steady pace ...regardless of the operator's skill, health or fatigue ...regardless of his presence at the machine, in the washroom, at the tool crib, or at another machine!

Production increases? Up to 100% on some installations — *at least 30% on every one!*

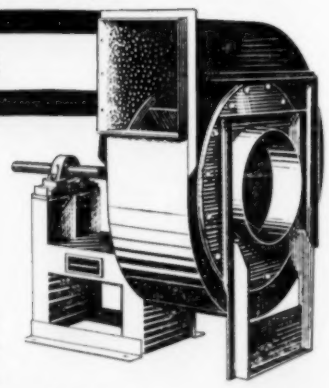
Let this FREE BOOKLET tell you the whole story. Write:

Lipe-ROLLWAY CORPORATION
Manufacturers of Automotive Clutches and Machine Tools
Syracuse 1, N. Y.

▲ For more details circle NED-524 E5 on enclosed inquiry slip ▲

NOW from DRACCO!

performance proved industrial fans



For All Air Handling Jobs
- General ventilation
- Dust collection
- Fume and high temperature exhaust work
- Conveying refuse, shavings, stringy materials

Dracco Industrial Fans—"Performance Proved" by 15 years' use with Dracco Dust Control systems—give longer, trouble-free service. Superior construction—welded, vibration-free, all steel elements, no castings to crack, precisely balanced, Rotation and discharge adjustable. Wide range of sizes—inlet diameters 11"-38", pressures to 17" S.P., volumes from 500-46,000 CFM. For better performance, specify Dracco Fans. For details, contact:

Write for 40-page Dracco Fan Bulletin No. 601 containing complete performance data and specifications.

DRACCO CORPORATION
4055 EAST 116th STREET
CLEVELAND 5, OHIO

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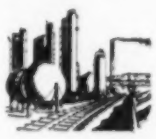
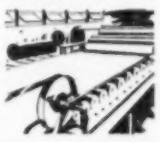
If you have a corrosion problem . . . SEE CEILCOTE FIRST! Here's a 4-page multi-colored illustrated catalog that presents comprehensive information on a complete line of corrosion-proof linings, bricks, bonding cements, protective coatings and mastic floors.

Twenty-seven of Ceilcote's corrosion-proofing materials are charted, showing their resistance to 19 of the most common chemicals which contribute to corrosive conditions in all types of industries.

Write today for catalog G-201 for complete information.

Metal Working


Chemical and Oil Refining


Pulp Paper and Textile

THE CEILCOTE CO.
CORROSION PROOF MATERIAL AND CONSTRUCTION
4838 RIDGE ROAD • CLEVELAND, OHIO

▲ For more details circle **NED-526 E5** on enclosed inquiry slip ▲

PRECISION
Machine Tool Attachments
with endless versatile variations
TRAVERSE SLIDES FEEDS TABLES
SPINDLES—MOTORIZED OR BELT DRIVE
FOR WORK HEAD OR GRINDING WHEEL

DO IT YOURSELF!

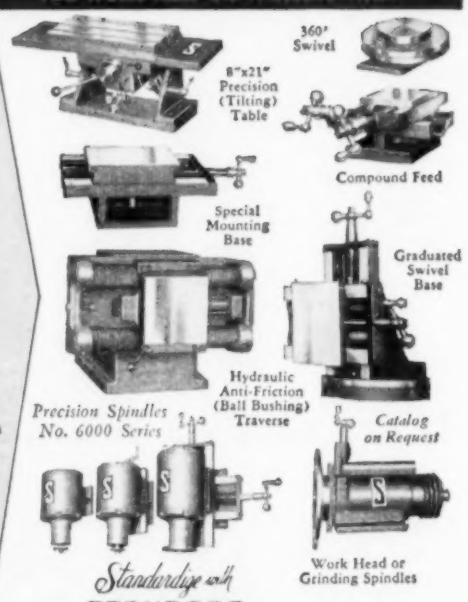
Select a STANDARD Precision Spindle and/or Work Head . . .

Assemble with STANDARD Feeds or Traverse . . .

To convert your old machine tool . . .

To design your own assembly or machine tool . . .

To incorporate in a special machine you wish STANDARD to build for you



Standardize with
the STANDARD electrical tool co.
MACHINE TOOLS
2488 RIVER ROAD • CINCINNATI 4 • OHIO

▲ For more details circle **NED-527 E5** on enclosed inquiry slip ▲

It's Quality Deserves Consideration
FISHER® LEVEL-TROL®

Factory calibrating or zeroing adjustment produces a correct 3 to 15 pound signal output for full float range operation.

Simple level adjustment indicating dial.

Combined pneumatic proportional band and specific gravity adjustment.

Small compact relay unit, minimum working parts.

All welds are in accordance with ASME code for unfired pressure vessels.

Universally Accepted for
• LIQUID LEVEL CONTROL
• LIQUID LEVEL INDICATION
• INTER FACE CONTROL

Engineered for peak performance the Fisher Series 2500 Level-Trol is designed to give rugged, trouble-free service. It is high in sensitivity and accuracy . . . it is versatile in handling all kinds of liquids, with minimum service attention.
Fisher Bulletin F-3 gives full details . . . write for your copy today!

FISHER GOVERNOR COMPANY Marshalltown, Iowa
FISHER *Since 1880*

▲ For more details circle **NED-528 E5** on enclosed inquiry slip ▲

OPERATORLESS TRUCK
electronically follows guide wire

Neither operator or physical connection is required for the operation of the Guid-O-Matic industrial truck or tractor which can follow any preset route through a factory, warehouse, shipping room or other facility. Tractor train shown is following a route set by a guide wire strung from the ceiling, but the wire can be laid in a small slot in the floor. Load moves steadily at any desired speed, under automatic control at all times. Radio waves that control the truck are transmitted over the wires by means of signal boxes installed at desired locations throughout the plant. To call a truck, a button is pressed and the truck comes to the station originating the signal. A "sniffer" box on the truck picks up the radio signals from the guide wire. Made by **Barrett-Cravens Co.**, 628 Dundee Rd., Northbrook, Ill.

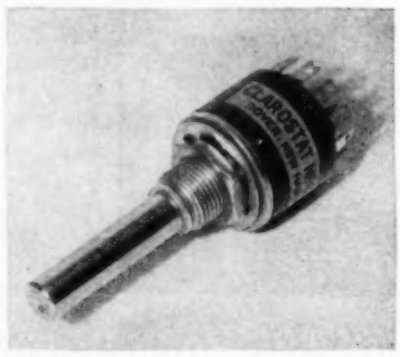
▲ For more details circle **NED-529 E5** on enclosed inquiry slip ▲

AUTOMATIC CARD FILE
trays rotate to proper work level

Rapid reference and posting is possible with this Kard-Veyer electrified rotary card index file. Movable shelves rotate from either direction to bring required file tray to the reference area, stopping at the posting area by automatic leveling. Control can be by foot switch to leave both hands of operator free. Equipment provides for maximum utilization of space and operates quietly. Made by **Remington Rand Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

▲ For more details circle **NED-530 E5** on enclosed inquiry slip ▲

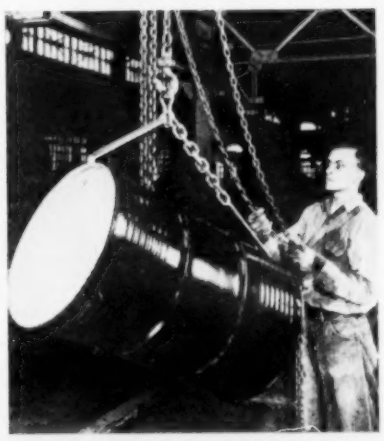
MINIATURIZED ROTARY SWITCH
handles 50 ma at 300 v ac or dc



Slightly larger than a penny, series BH miniaturized rotary selector switch provides for wide range of multiple switching operations. It is available in single-pole (up to 12 positions), two-pole (6 positions), three-pole (4 positions), and four-pole (3 positions). Of enclosed construction for either military or commercial use, it has 3/8-in. bushing and 1/4-in. shaft. Made by **Clarostat Mfg. Co.**, Washington St., Dover, N. H.

▲ For more details circle **NED-531 E5** on enclosed inquiry slip ▲

BARREL HOOK
made of spark-resistant alloy



This all-position barrel hook is made of durable, spark-resisting alloy for handling drums of flammable or explosive fluids or materials. Sliding ring which can be locked between links allows drum to be either lifted or tilted for emptying. Overall length of hook is reduced from 47 to 42 in. to provide greater head room when handling drums from storage racks. Safety factor above the 1500-lb safety test given each hook has been allowed. Made by **Ampco Metal, Inc.**, Dept. 5-55, 1745 S. 38th St., Milwaukee 46, Wis.

▲ For more details circle **NED-532 E5** on enclosed inquiry slip ▲

Do the job BETTER with SQUARE D Pneumatic Timers

Whether your requirements call for A.C. or D.C., these Square D design features deliver the most in consistent and accurate performance

Wide Range • Time delay period easily adjusted over a period of 0.2 seconds to 3 minutes in an infinite number of steps.

Easy Adjustment • Finger tip adjustment of timing period can be made simply by rotating a knurled knob or a micrometer dial.

Repeat Accuracy • Less than 10% variation from the mean timing period. Accurate timing, even under abnormal ambient temperature conditions.

Write for Bulletin 225. Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle **NED-533 E5** on enclosed inquiry slip ▲

RESCUES LAGGING PRODUCTION!

KESTER FLUX-CORE SOLDER has saved the day for many a bogged-down production line. Perhaps it's just the "life saver" you've needed to get your operation back into high gear again. We'll be glad to give you the complete story on Kester's half-a-century's solder experience right away . . . no obligation, of course.

SEND TODAY for the 78-page Kester informative textbook "SOLDER . . . Its Fundamentals and Usage."

KESTER SOLDER
COMPANY 4249 Wrightwood Avenue, Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

▲ For more details circle **NED-534 E5** on enclosed inquiry slip ▲

In 1 minute

The Verifax Copier, Kodak's sensational new office aid, gives you—

3 copies

of a letter, office record, news clipping or other item. Your copies will be dry, photo-exact . . . can be made even under fluorescent lighting by anyone.

only 4¢ apiece

. . . a surprisingly low price. *And here's the secret:* a unique Kodak development lets you get 3 or more copies from just *one* sheet of Matrix Paper. And you expose the document you're copying *only once.*

You should see a demonstration of this *completely different* copier in your office soon. What you'll save on *re-typing alone* quickly covers its $240 cost. Write for free Verifax folder and names of near-by dealers.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.
Price quoted is subject to change without notice.

Kodak

▲ For more details circle **NED-535 E5** on enclosed inquiry slip ▲

Versatile... High Efficiency

BENNETT BIG G TRANSFER PUMPS

Handle up to 20 gallons per minute of a wide range of liquids. High performance, because each stroke is pumping stroke. Bronze automotive type pistons, end valve and leather troubles. Write for details.

Bennett BIG G can be ordered for drum mounting or with tripod and suction hose

JOHN WOOD COMPANY
BENNETT PUMP DIVISION
Muskegon, Michigan

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BUCKET ELEVATORS

Jeffrey Vertically-Encased, Super-Capacity Bucket Elevator in a large stone quarry. For complete information on all types of Bucket Elevators, send for Catalog 850.

THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED ...IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

▲ For more details circle NED-537 E5 on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH

for quick heat up to 750°

Use the Mamco Flameless Blow Torch on any application requiring a concentrated hot air blast. You can soften, form, mold and patch plastics, etc. easily with safety . . . The Mamco Flameless Blow Torch gives you quick heat up to 750° *without flame.*

Powerful Mamco electric motor 110-120 Volt AC and DC. Turbo type fan provides steady, strong air blast. Eight foot heavy duty cord. Double jacketed heater housing. Adjustable air intake. Order direct.

Price $28.50

WRITE DEPT. N.

Master APPLIANCE MFG. CO. RACINE, WISCONSIN

▲ For more details circle NED-538 E5 on enclosed inquiry slip ▲

PIPELINE CHEMICAL MIXER
1 to 10,000 gpm capacities

Homomix continuous pipeline chemical mixer is applicable to various process industries for blending, absorbing, contacting, washing and chlorinating. Made in sizes and capacities from 1 to 10,000 gpm, device mixes instantaneously at the point of entry into the pipeline, providing violent and uniform blending of one or more chemicals in liquid, gas or slurry form, continuously or intermittently. Equipment is built with one or more stages and is part of the influent piping. Each stage consists of a diffusing impeller rotating in a blending chamber, driven by a continuous shaft, direct-connected to the prime mover or motor. Installation can be in vertical, horizontal or inclined position in any pipe line. Made by **American Well Works,** 150 N. Broadway, Aurora, Ill.

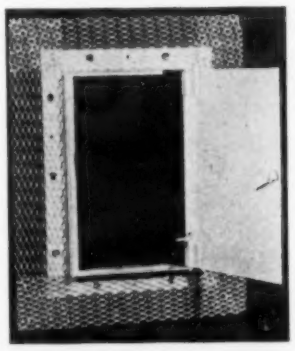
▲ For more details circle NED-539 E5 on enclosed inquiry slip ▲

TEMPERATURE METER
for metals, liquids and air

Temp-Check model 386H portable temperature meter operates on a flashlight battery and has a range from −50 to 1000° F. Fitted with a sensitive thermocouple, it quickly measures temperatures of metals, liquids and air and eliminates delays caused by waiting for gage blocks or work to return to normal temperatures. A quick calculation from the reading tells exact dimensions. Made by **Webber Gage Co.,** 12922 Triskett Rd., Cleveland 11, O.

▲ For more details circle NED-540 E5 on enclosed inquiry slip ▲

ACCESS DOORS
available in five sizes



Fire and termiteproof and finished with a rust inhibitive paint, enlarged line of Miami-Carey steel access doors can be used for enclosures for electrical equipment, switches and plumbing valves. They are made in 20 models in five sizes with two lock types. They can be supplied for masonry, plaster and dry wall construction. They feature 14-gage doors, 16-gage steel frames and cam locks that can be screwdriver operated. Edges of frame and door are flush with the surface. Hinge lift lever is provided for quick removal of the door. Made by **Philip Carey Mfg. Co.,** Miami Cabinet Div., Dept. SA-12, Cincinnati 15, O.

▲ For more details circle NED-541 E5 on enclosed inquiry slip ▲

TUNGSTEN CARBIDE BALLS
for finishing fractional-size holes

Tungsten carbide balls for sizing and finishing fractional-size holes are offered in sets for tool room and general repair shop work, or short-run production. Ballizing process consists simply of pressing proper size ball through unfinished hole. Set 13 is for finishing holes from 1/8 to 1/2 in. diameter by 1/32-in. increments and set 8, for holes from 9/16 to 1 in. by 1/16-in. increments. Set No. 21 combines the other two sets. All balls are furnished in individual plastic vials identified as to ball size and finished-hole diameter. They are accurate to ±0.0001-in. on diameter and 0.000020-in. on sphericity, and have 1-microinch finish. Sets in wooden cases are offered by **Industrial Tectonics, Inc.,** Dept. NED, 3684 Jackson Rd., Ann Arbor, Mich.

▲ For more details circle NED-542 E5 on enclosed inquiry slip ▲

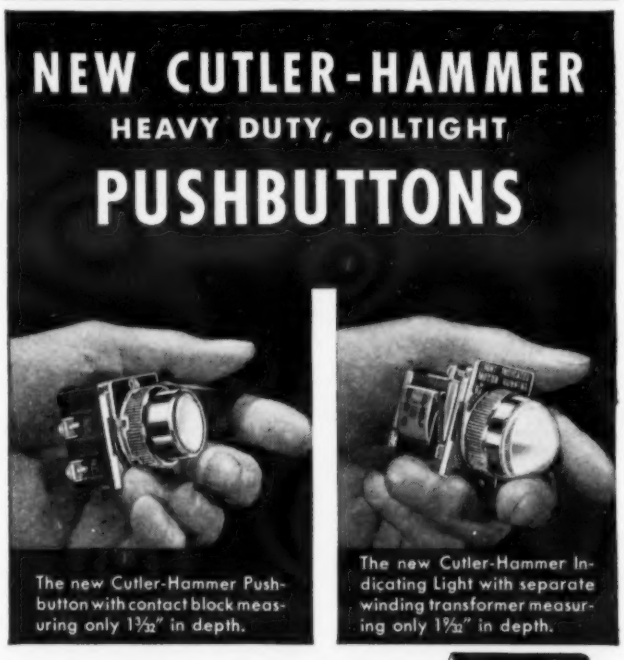
AIR TOOLS CHOKE UP, TOO

Protect them against rust, scale, and air-line condensation with Keller Filter-Lubricators. Oil feeds through an upright wick into the air stream . . . no flooding or waste. Transparent bowls show when cleaning is needed, or light spindle oil should be added. Write for Bulletin No. 65-1.

KELLER TOOL
DIVISION OF GARDNER-DENVER
GRAND HAVEN, MICH.

▲ For more details circle NED-543 E5 on enclosed inquiry slip ▲

NEW CUTLER-HAMMER HEAVY DUTY, OILTIGHT PUSHBUTTONS



The new Cutler-Hammer Pushbutton with contact block measuring only 1 3/32" in depth.

The new Cutler-Hammer Indicating Light with separate winding transformer measuring only 1 9/32" in depth.

New small size contact blocks. New circuit flexibility. Better design; better performance; better appearance.

New small size contact block with both electrically and mechanically isolated contacts.

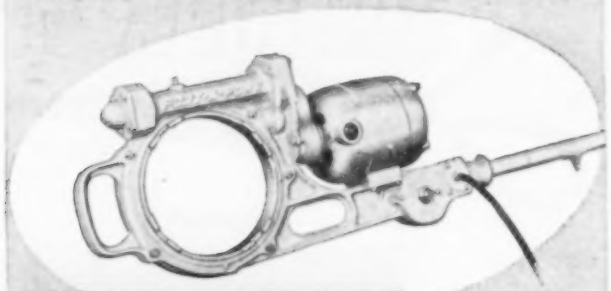
There is nothing to compare with Cutler-Hammer's new line of heavy duty oiltight pushbuttons, selector switches and indicating lights. There is nothing to compare with the new small size contact block which measures only 1 3/32" in depth behind the mounting panel. Nor is there anything to compare with the greater degree of circuit flexibility this new contact block provides. Only *this* has contacts "in parallel," electrically isolated from one another so that you can apply a different voltage on each set, or alternating current on one and direct current on the other. There is nothing to compare in size or design with the indicating light, resistor or transformer type; nothing to compare in visibility with the new Cutler-Hammer indicating light.

So it goes throughout the complete new line. Every type of operator; every type of pushbutton; full range of colors in pushbuttons and indicating lights; new chrome-plated operators for lasting beauty; new design diaphragm for lasting performance. These and many, many other features are described in a new, fully illustrated bulletin. Write for it now. See the complete line at your authorized Cutler-Hammer distributor. CUTLER-HAMMER, Inc., 1377 St. Paul Avenue, Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ontario.

CUTLER-HAMMER MOTOR CONTROL C-H

▲ For more details circle NED-544 E5 on enclosed inquiry slip ▲

THREAD - PULL - DRIVE - OPEN - ROLL



with PORT-A-PONY

The Featherweight *POWER DRIVE

Save time, money, and labor, on the job, by using PORT-A-PONY to:

1 Thread and cut pipe (up to 8").
2 Thread rods and bolts (up to 1").
3 Pull wire through conduit.
4 Drive winches.
5 Open and close valves.
6 Roll Boiler flues.

PORT-A-PONY is adaptable to all popular-make die stocks.

*PORT-A-PONY weighs 26 lbs.

WRITE FOR FULL INFORMATION

THREAD-EZY MFG. CO

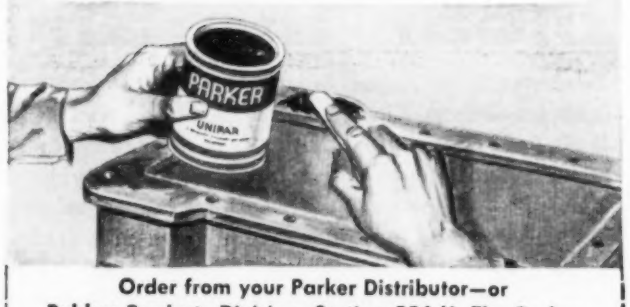
N. Brady Street Corunna 2, Michigan

For more details circle NED-545 E5 on enclosed inquiry slip

Use Parker *Unipar* for sealing threaded joints

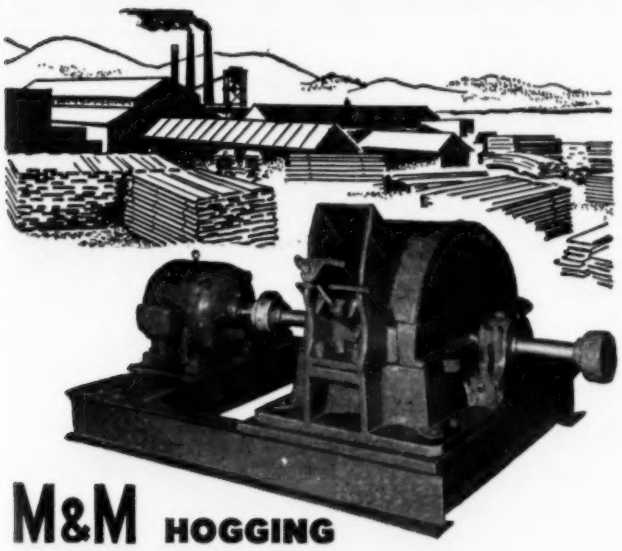
- Universal thread and gasket compound.
- Easy to apply. Lubricates and seals. Easy to disconnect.
- Seals water, steam, gas, oil, gasoline, etc.
- Extreme pressures; temperature range −70° to +300°F.
- Two 1-pound cans . . . $3.00 plus postage.
- Call us for immediate delivery of Parker *Unipar*.

Parker
Hydraulic and fluid system components



Order from your Parker Distributor—or Rubber Products Division, Section 554-U, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio

For more details circle NED-546 E5 on enclosed inquiry slip



M&M HOGGING EQUIPMENT

M & M Wood Hogs reduce scrap lumber to small uniform wood chips suitable for fuel, and many other purposes. Built in sizes and types to handle slabs, trim, edgings, blocks, veneer, bark and other combustible waste. Write for catalog giving complete information.

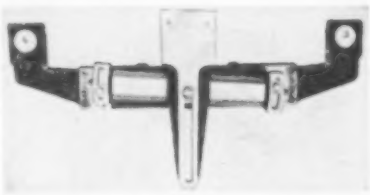
MITTS & MERRILL

1000 South Water Street • SAGINAW, MICHIGAN

84

For more details circle NED-547 E5 on enclosed inquiry slip

TAPER ATTACHMENT
fits all types of lathes



Heavy duty taper attachment will fit all types of lathes. Attachment incorporates dovetailing slides or ways to assure accuracy and single over-arm is connected to cross slide of lathe. Simplified method of clamping allows setup in minutes. Length of carriage and distance across top of 45-degree V-way of lathe are only two dimensions needed for factory fitting. Attachment weighs about 80 lb and price ranges from $150 to $175. For smaller lathes with a 10-in. swing a light-duty unit is available for $45. Made by **Master-Taper Co.,** Dept. NED, 4543 N. Clark St., Chicago 40, Ill.

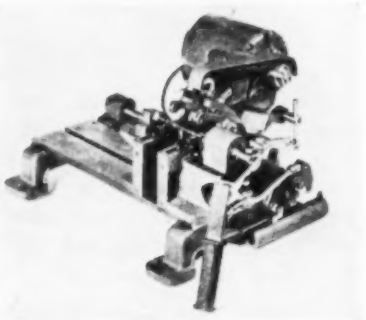
For more details circle NED-548 E5 on enclosed inquiry slip

OFFICE PARTITIONS
flush and free-standing

Only tool needed to install Flushlok Flexi - Walls is a screwdriver. These flush, free-standing office partitions are erected without alteration of floors, walls or lighting and can be dismantled easily and stored. Double-walled panel construction with cellular insulation retards sound. Ten stock widths and 39, 54 and 68-in. heights are available with green, gray or tan baked-on finish. Made by **Hemisphere Steel Products Corp.,** Flushlok Div., Dept. ED, 37-01 Queens Blvd., Long Island City 1, N. Y.

For more details circle NED-549 E5 on enclosed inquiry slip

CENTERING MACHINE
for small cylindrical work



Round workpiece concentricity is held to within 0.0003-in. with this compact bench-mounted centering machine. Fully portable machine centers, drills, spot - faces, chamfers and pin-points up to 1-in. diameter round workpieces of any length. Work is rotated at speeds of 15,000 rpm while tool remains stationary. Powered by ⅓-hp G-E motor, machine will produce up to 800 centers per hour. Made by **Central Engineering Co.,** Dept. 15, 930 Erie St., Racine, Wis.

For more details circle NED-550 E5 on enclosed inquiry slip

MULTIPLE PIPING HEADER
for welded chemical and other pipe

Fabrication of welded piping for petroleum, chemical, power, processing, air conditioning and heating applications is simplified with Tube-Turn multiple branch tees which have integral extruded outlets. Tees conform to the Code for Pressure Piping area replacement formula. They are especially useful where branch outlets are appreciably smaller than the run pipe. Size, wall thickness, and the number and size of the outlets are determined by the individual service conditions of the customer's intended application. Tees are available in all commercial metals and alloys from **National Cylinder Gas Co.,** Tube Turns Div., Dept. A, 224 E. Broadway, Louisville 1, Ky.

For mor details circle NED-551 E5 on enclosed inquiry slip

Stop Breaking Your Taps...
Use Wickman Tapping Attachments

Instant Pre-Selection of Tapping Torques

Pre-selected tapping torques are instantly obtained by pre-setting the pressure on a two tooth clutch to the required tap size—the highly resilient pressure unit allows the clutch to slip when tap is overloaded.

Wickman High Speed Tapping Attachments (Model K)
—Morse Taper Shank is attached as an integral unit . . . Special shanks on request.

Wickman Combination Tapping Attachments (Model T)
provide for efficient interchangeability of tooling. Adaptors for holding taps, drills, reamers, counterbores, etc. can be inserted in the same quick-change chuck.

Wickman Tapping Attachments for Turret Lathes (Model TS)
also permit presetting of tapping torque, thus preventing tap breakage.

Sizes & Range: Model K & T—3/16" to 1¾"
Model TS—3/16" to 1"

THE Wickman MANUFACTURING CO.
10327 CAPITAL AVE. (OAK PARK) DETROIT 37, MICH.

For more details circle NED-552 E5 on enclosed inquiry slip

Win the Germ War!

Use PIONEER Stanzoils®

Only a liquid-tight glove gives positive physical protection from chemicals and germs that cause hand dermatitis. Also protects products from contamination by hands.

PIONEER *milled* neoprene stands extra hours of use in contact with oils, acids, caustics, detergents and solvents—has higher tensile, greater tear resistance than any other oil-resistant rubber.

Super-safe grip creates confidence, speeds work—handles wet slippery objects as if dry.

32 PIONEER styles, weights sizes and colors. Send for Stanzoil catalog—shows quickly how to select best, most economical glove for each job.

Stanzoil N-30 Whitecaps lightweight neoprene, sanitary white. Non-slip grip, curved fingers. Length 10½".

The PIONEER Rubber Company

234 Tiffin Road • Willard, Ohio

Quality Gloves for 35 Years

For more details circle NED-553 E5 on enclosed inquiry slip

Comar's TYPE TS MINIATURE RELAY

Rugged miniature telephone-type DC relay designed to give efficient dependable service under extreme conditions of vibration, shock and temperature.

Ideal for communications apparatus, aircraft and radar electronic test equipment, power packs, reset timers and other applications.

Coils: For standard voltages up to 125 volts, D. C. or 6500 ohm coil. Average coil consumption, 3 watts.

Contacts: Combinations up to 6PST (open type), 4PDT (sealed). Contacts are of fine silver, rated 3 amps. @ 28 V.D.C., 1 amp. @ 115 V.A.C., non-inductive. Other contact materials available.

Amb. temperature range: −55°C to +85°C. Special coils available for ambient temperatures, −65°C to +125°C.

Shock and acceleration: Up to 50G.

Vibration: 10G, at 5 to 500 CPS., depending on contact combinations.

Life expectancy: 1,000,000 cycles (minimum).

Size: 1 5/32" x 23/32" x 1 13/64".

another great relay from—

Comar ELECTRIC COMPANY
3349 Addison Street
Chicago 18, Illinois

RELAYS • SOLENOIDS • COILS • TRANSFORMERS • SWITCHES • HERMETIC SEALING

▲ For more details circle NED-554 E5 on enclosed inquiry slip ▲

SPACE SAVER THAT'S POWER PACKED!

S-N MODEL 5108

REVERSING TRANSMISSION up to 8 H.P.

in a single unit for quick, smooth reversing *under full load*

This remarkable new type of reversing transmission—by one of the world's most famous gear makers—offers the design engineer a wider latitude in transmission performance, as well as new economies in materials and assembly, heretofore unavailable with ordinary transmissions. Its application is practically unlimited, thereby increasing the versatility of the equipment in which it is installed—particularly in materials handling equipment, farm implements and construction machines. There's no doubt about it. **You can't afford to overlook these exclusive S-N features and savings. You can use them and so can your customers!**

Our 50 years of specialized knowledge and experience as gear designers and manufacturers is at your service. Why not let us help you with your problems? Write today for our new Model 5108 folder or specify your needs, stating application, input and output speeds desired, H.P., power source, equipment to be driven.

SNOW-NABSTEDT
Transmission Engineers
FOR NEARLY HALF A CENTURY
INDUSTRIAL DIVISION
THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.

▲ For more details circle NED-555 E5 on enclosed inquiry slip ▲

TEMPERATURE-SENSING PROBES for use with thermistor thermometer

Fast response, small size and wide variety of applications are features of new temperature - sensing probes available for use with the YSIC thermistor Tele - Thermometer. Shown in the photo are fast-acting stainless steel probe (1), air temperature probe (2), flat surface probe (3), flexible immersion probe (4), fast-acting oral probe (5) and hypodermic probe (6). Uses include measurement of air temperatures of test rooms and incubators, quick determination of liquid temperatures, remote thermometry as in nuclear work and weather studies. Made by **Yellow Springs Instrument Co.,** Xenia Ave., Yellow Springs, O.

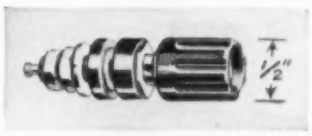
▲ For more details circle NED-556 E5 on enclosed inquiry slip ▲

SOLDERING GUN heats in less than 6 seconds

Increased wattage of Primax soldering gun enables it to reach soldering heat in less than 6 seconds. Gun features unbreakable plastic handle and an alloy tip which never has to be filed. Tip will last indefinitely in normal use. Wiping with rag or paper instantly restores its tinned luster. Gun's balanced grip and trigger control make for easy soldering in hard-to-reach places. Models for 110 or 220 v ac operation are available from **Paul C. Roche Co.,** 11-N Park Pl., New York 7, N. Y.

▲ For more details circle NED-557 E5 on enclosed inquiry slip ▲

PANEL BINDING POST has only ½-in. OD



Outside diameter of only ½-in. enables series 29 multipurpose binding post to be mounted on ¾-in. centers or less. Post can be mounted on panels up to 3/16-in. thick. Metal parts on post are brass, cadmium plated 0.0003 to 0.0005-in. thick to withstand 50 hour minimum salt spray exposure. Insulation is molded thermosetting phenolic in accordance with MIL-P-14, type CFG, which will withstand 295° F without distortion. Hex studs are recessed into hex nest in phenolic to prevent turning. The 3/32-in. crosshole of stud is flush with base to minimize crimping or cutting of inserted wire lead. Posts are made in red and black by **Grayhill,** Dept. NED, 561 Hillgrove Ave., La-Grange, Ill.

▲ For more details circle NED-558 E5 on enclosed inquiry slip ▲

ACETYLENE TORCH OUTFIT has two handles, seven head styles

The two handle assemblies and seven different head styles which make up this acetylene torch outfit will serve the full range of heating and soldering work. Torch is lightweight and balanced, and heads run cool enough to be handled for quick changing. Designed to cope with silver soldering applications in plumbing, it is fast enough for refrigeration work, as well. Torch also provides pencil flame for electrical work and has copper heads suited for sheet metal jobs. Precision regulator is solid brass. A Bunsen burner which will work on the torch handle, or separately as a complete unit with its own valve, is available. Offered by **Ransome Co.,** Room 10, 4030 Hollis St., Emeryville, Calif.

▲ For more details circle NED-559 E5 on enclosed inquiry slip ▲

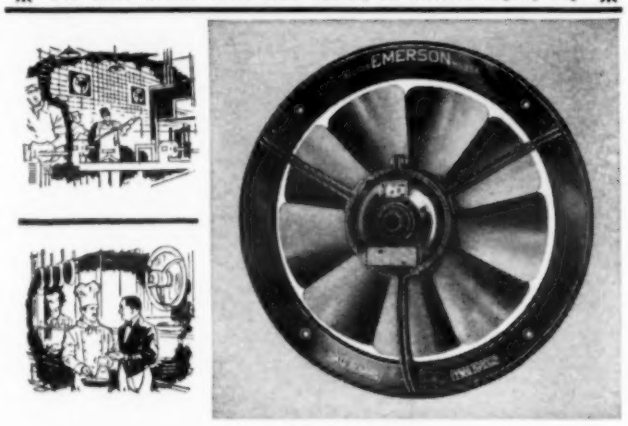
PULLMAX for CUTTING COSTS

LOOK at what one PULLMAX can do for YOU — in YOUR SHEET METAL — ENGINEERING — AND MAINTENANCE DEPT.

WRITE FOR THE PULLMAX CATALOG OF MONEY-SAVING METAL WORKING IDEAS

AMERICAN PULLMAX COMPANY, INC.
2457 NORTH SHEFFIELD AVENUE • CHICAGO 14, ILLINOIS

▲ For more details circle NED-560 E5 on enclosed inquiry slip ▲



clear the air!

Wherever large masses of air should be cleared out, install Emerson-Electric direct-drive exhaust fans. Built in 5 sizes, 12-in. to 30-in., capacities range up to 6,700 CFM, free air. Can be mounted vertically, horizontally or at any angle—overlapping blade assembly assures unusually quiet operation—fully enclosed two-speed, ball-bearing motors. Send for Catalog No. 2018. THE EMERSON ELECTRIC MFG. CO., ST. LOUIS 21, MO.

Emerson-Electric
of St. Louis • Since 1890

▲ For more details circle NED-561 E5 on enclosed inquiry slip ▲

makes the Solid Arbor obsolete

CHAMPION E-X-P-A-N-D-I-N-G MANDRELS

The expanding sleeve, mounted on tapered arbor, expands automatically to fit the hole. Inserted by hand — no arbor press needed. Always an exact, positive, concentric fit. Locked by a single mallet blow. Unlocked the same way. CHAMPION Expanding Mandrels are used in machine shops around the world. Save time, cut production costs, whether the job calls for machining one piece or a thousand.

Precision Model has expansion range of .010". Available in regular sizes to fit holes from ½" to 3" diam. Holds work to tolerances of .0002" run-out. Guaranteed for precision grinding, turning and milling operations.

Standard Model maintains close tolerances, handles material of any length bore, hard or soft metals — from thin tubes and bushings to heavy castings and forgings. A set of fourteen will fit every hole from ½" to 9½" diam.

CHAMPION *Expanding Mandrels can be made in special shapes and sizes to fit any specifications. Quotations on request. Write for descriptive folder today.*

WESTERN TOOL & MFG. CO., INC.
Our 54th Year • Dept. 29 • Springfield, Ohio

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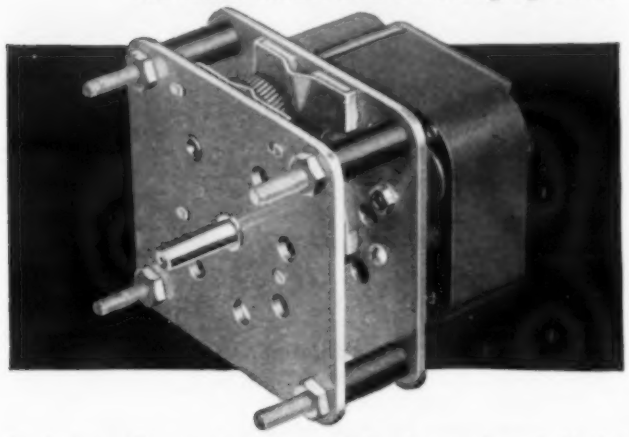
BARBER COLMAN

Barcol®

Small Motors

now with new, improved gear reduction for radial thrust and overhanging loads



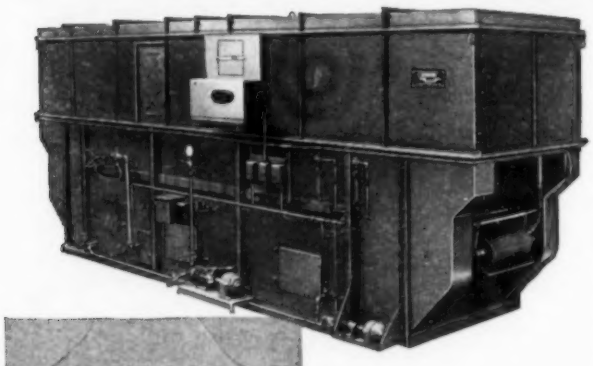
Here's a versatile, new open-type geared Barcol motor in a *double-plate assembly* for extra ruggedness, quietness, and dependability. Heavy duty gears and output shaft. Helical pinion and first gear provide quiet operation. Sintered bronze bearings lubricated by extra large oil wicks. In gear ratios from 4:1 to 30,000:1. Starting torques up to 75 lb-in. Choice of synchronous or non-synchronous unidirectional motors, or non-synchronous reversible motors. High torque to inertia ratio of reversible motors is ideal for servomechanisms. Write for illustrated Bulletin F-6841 on Barcol DYAZ Motors.

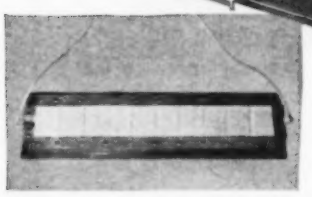
Barber-Colman Company Dept. Q, 1214 Rock St., Rockford, Ill.

▲ For more details circle **NED-563 E5** on enclosed inquiry slip ▲

Scrubs out the last speck of **DIRT**

CIRCOSONIC ULTRASONIC DEGREASER





. . . LOW FREQUENCY TRANSDUCERS MAKE THE DIFFERENCE!

Use Circosonic whenever cleanliness must meet stringent industrial or military standards. New transducer operates at lower frequency which cuts shadow effect so that ultrasonic waves curve around corners . . . remove every last speck of oil, grease, lapping compound and dirt from deepest recesses and capillaries as no other method can do. Flat shape beams sound energy over wider area . . . requires no critical positioning when cleaning small parts like bearings and electronic components . . . extends to any desired length for large shapes like transmission pumps and gears. Circosonic units cut cleaning time from hours to *seconds* . . . can also be integrated into existing cleaning equipment.

Illustrated is typical Circo conveyor type vapor degreaser with ultrasonic chamber. Conventional degreaser removes heavy contaminants. Ultrasonic unit finishes the job perfectly.

MANY STANDARD MODELS . . . Units from 500 watts to 25 kw. Available separately or integrated with Circo Vapor Degreasers, conveyorized or hand operated. All backed by nation-wide technical field service.

YOUR INQUIRY BRINGS complete ultrasonic technical data . . . plus authoritative 32-page Vapor Degreasing Manual. No obligation, of course.

SINCE CIRCO 1923

EQUIPMENT COMPANY

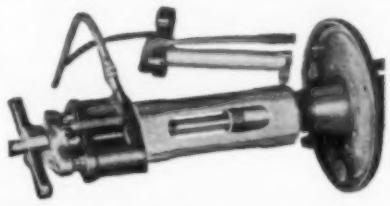
126 Central Avenue, Clark (Rahway), New Jersey
Offices in principal cities

PER-SOLV (Perchlorethylene) • CIRCO-SOLV (Trichlorethylene) Vapor and Ultrasonic Degreasers • Metal Parts Washers Dryers • Solvent Recovery Stills

▲ For more details circle **NED-564 E5** on enclosed inquiry slip ▲

AXLE-TUBE PULLER
is 50-ton hydraulic device

Axle tubes and sleeves are readily removed or installed with this 50-ton hydraulic puller. If axle tube is broken, an adapter can be welded on the end of the tube which is then pulled without disassembling the differential. Hydraulic power for puller is supplied by hand-operated pump. Made by **Owatonna Tool Co.**, 436 N. Cedar St., Owatonna, Minn.



▲ For more details circle **NED-565 E5** on enclosed inquiry slip ▲

DRINKING WATER COOLERS
cooling capacities from 5.2-27 gph

Cooling capacities from 5.2 to 27 gph at standard rating conditions are featured in line of Temprite drinking water coolers. Contributing to these increased capacities, newly designed evaporator offers instantaneous cooling with storage. Maximum peak draw requirements are provided. Satin-finish stainless steel top with deep basin, extra full anti-splash guard and automatic water control prevents splashing and spurting. Dual water flow control, affording both finger-tip operation and foot-pedal control, is standard. Dual thermostats guard against accidental freeze-ups. Made by **Temprite Products Corp.**, P. O. Box 72-NED, Birmingham, Mich.

▲ For more details circle **NED-566 E5** on enclosed inquiry slip ▲

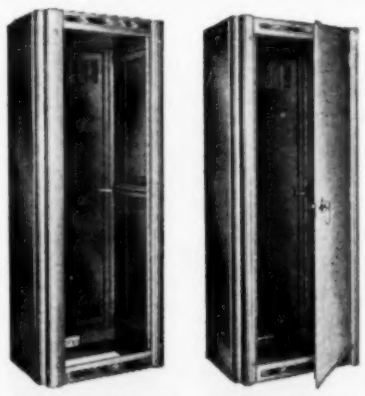
MOBILE RADIO TELEPHONE
for two-way communications

Applicable for in-plant and inter-plant industrial communications which require higher power than LPI (low power industrial) units, Progress line of FM mobile and base station radio equipment operates on both 25-54 megacycle and 144-174 megacycle frequencies. Line has been specifically designed, from microphone to speaker, to cover the widely divergent requirements of all the numerous land mobile radio services. Improvements in mechanical and electronic specifications result in minimum of maintenance. Filament wiring of all transmitters is arranged for either 6 or 12-v operation. Receivers will operate from either a 6 or 12-v dc source or from a 117-v ac power supply without modification. Made by **General Electric Co.**, Electronics Park, Syracuse 1, N. Y.

▲ For more details circle **NED-567 E5** on enclosed inquiry slip ▲

CABINET RACKS
various heights, widths, depths

Provisions for mounting chassis supports, shelves, sliding shelves and standard sliding devices are incorporated in line of assembled racks, offered with front and rear doors, front doors only, or without doors. Detachable side panels are also optional, as racks can be used singly or in rows. Racks are made in standard 19 and 24-in. widths, 18 and 23-in. depths and 48⅛, 67⅜, 76⅛ and 83⅛-in. heights. Intermixing of similar height racks with any combination of 19 and 24-in. widths is possible. Vertical side supports are installed without drilling or fitting. Various finishes are available. Made by **Par-Metal Products Corp.**, 32-66 49th St., Long Island City 3, N. Y.



▲ For more details circle **NED-568 E5** on enclosed inquiry slip ▲

Read how to STEP UP your TAKE-UP!

If your product can be traverse wound onto spools, tubes or cones, send for bulletin "*Precision Winding*." It tells you how Leesona Take-Up Machines produce precision wound packages — for sale or further processing — directly from production equipment, at the speed at which the material is fed. Materials taken up by these ultra-modern machines include:

Extruded plastics . . . tapes . . . glass yarn . . . nylon thread . . . narrow flat paper and cellophane.

In these and many other applications, Leesona Take-Up Machines are protecting products, adding sales appeal — *and eliminating rewinding*. Send for these profit-boosting facts today!

UNIVERSAL WINDING COMPANY
P. O. Box 1605, Providence 1, R. I.
Boston • Philadelphia • Utica • Charlotte
Atlanta • Chicago • Los Angeles
Montreal and Hamilton, Canada

▲ For more details circle **NED-569 E5** on enclosed inquiry slip ▲

Save! with

CARBON-GRAPHITE MATERIALS *and* COMPONENTS

Write for Booklet 40A for details on Stackpole carbon-graphite specialties to solve friction, temperature, corrosion, lubricating and arcing problems. Letterhead request, please!

- ✓ GROUND RODS
- ✓ VOLTAGE REGULATOR DISCS
- ✓ BEARINGS
- ✓ DASH POT PLUNGERS
- ✓ RESISTANCE WELDING AND BRAZING TIPS
- ✓ GLASS MOLDS
- ✓ NON-WELDING CONTACTS
- ✓ FRICTION SEGMENTS
- ✓ CLUTCH RINGS
- ✓ BRAZING BOATS
- ✓ MOLDS AND DIES
- ✓ CONTINUOUS CASTING DIES

STACKPOLE

STACKPOLE CARBON COMPANY • *St. Marys, Pa.*

EVERYTHING IN CARBON BUT DIAMONDS

▲ For more details circle **NED-570 E5** on enclosed inquiry slip ▲

If You Use Fastenings Harper Is Your Ideal Source

If you use bolts, nuts, screws, washers or rivets of corrosion-resistant metals, Harper should be your number one source.

Harper is the largest company specializing in standard and special fastenings of brass, bronze, Monel, aluminum and stainless steel. 7,000 items in stock. There is a Harper Branch or Distributor near you.

HARPER
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Avenue
Morton Grove, Illinois

☐ Please send copy of catalog No. 26
☐ Please quote on attached specifications
☐ Please have salesman call

Name.....
Address.....
City.....State.....

▲ For more details circle **NED-571 E5** on enclosed inquiry slip ▲

Send for FREE sample kit . . . amazing new non-woven fabric

Here is a handy, *complete sample kit* that lets you see, feel, twist, pull or cut actual swatches of amazing new non-woven TUFFLEX Fabrics. It suggests how TUFFLEX Fabrics can save you time and money in production, add quality and durability in finished goods. For TUFFLEX Fabrics are clean, durable, resilient, dustless, odorless, workable—have good thermal-, sound-, and shock-insulating qualities. They are available in a variety of densities and thicknesses.

And so adaptable that they can be made firm or soft, dense or light, thick or thin, stiff or flexible, plain or colored! TUFFLEX Fabrics are now doing hundreds of jobs—new uses are being found every day. Send for idea-starting free sample kit. Wood Conversion Company, Dept. 127-55, First National Bank Bldg., St. Paul 1, Minnesota.

KEEP YOUR EYES ON TUFFLEX* FABRICS

*Reg U.S. Pat. Off.

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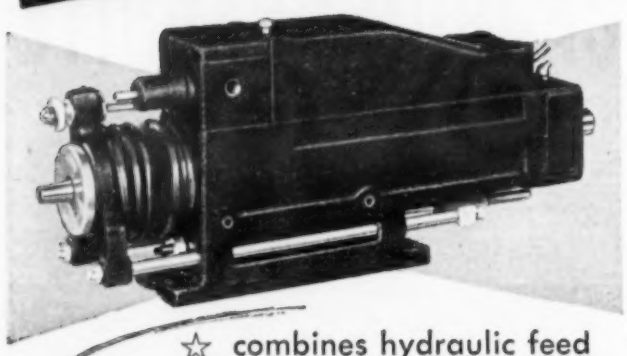
bellows-locke DRILL UNIT



☆ combines hydraulic feed

☆ air powered rapid advance

☆ electrically driven spindle

Full 3" stroke—any part usable. Takes up to 5/16" drills. Either pulley driven or direct motor drive models available. Compact, streamlined, light-weight. Can be mounted at any angle in any plane. Any number of units can be easily synchronized and interlocked for accurately timed sequence operation.

Write for BULLETIN BL-5R

Address Dept. NED555

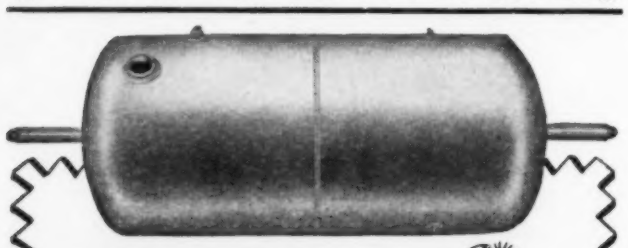
The Bellows Co.

1156-A

AKRON 9, OHIO

In Canada: Bellows Pneumatic Devices of Canada, Ltd., Toronto, Ont.

▲ For more details circle NED-573 E5 on enclosed inquiry slip ▲



compare the cost...

...of a completely fabricated Hackney Part like this with the cost of forming, welding and machining operations in your plant. Hackney Parts reach your production line ready for assembly into the finished product—often save money and time for users.

Your engineering department may come up with other advantages, too, when replacing a cumbersome cast, forged or welded pipe part with a Hackney Deep Drawn Shape or Shell—advantages such as lighter weight, greater durability, increased vibration resistance, closer tolerances and smarter appearance. Write for information.

Hackney MILWAUKEE

PRESSED STEEL TANK COMPANY

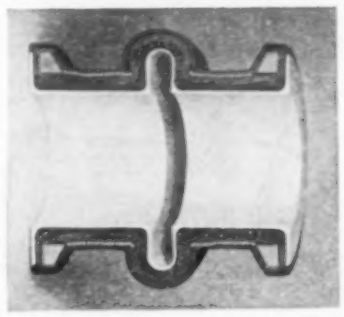
Manufacturer of Hackney Products

1450 S. 66th St., Milwaukee 14, Wisconsin

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

▲ For more details circle NED-574 E5 on enclosed inquiry slip ▲

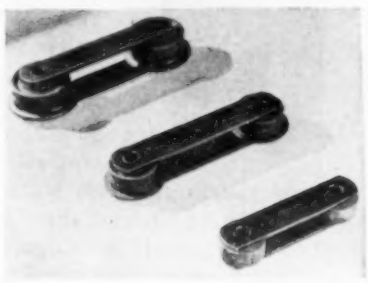
EXPANSION JOINTS of steel-reinforced rubber



Rubber compound combined with plies of cotton duck and reinforced with steel wire is used in expansion joints made for use with piping and flanges made by Haveg Corp. and Duriron Co. Steel rings are incorporated in the flange ends of the joint to permit tightening of the connections without shearing the joint. Known as Garlock 209 expansion joints, they are available for pipe sizes from 1 to 12 in. Special joints can be furnished with neoprene lining or neoprene lining and cover, if oil is present in line or in contact with the exterior; neoprene throughout if the line carries petroleum derivatives; or with Teflon liner if the line carries liquids or gases harmful to rubbers. Made by **Garlock Packing Co.**, 300 Main St., Palmyra, N. Y.

▲ For more details circle NED-575 E5 on enclosed inquiry slip ▲

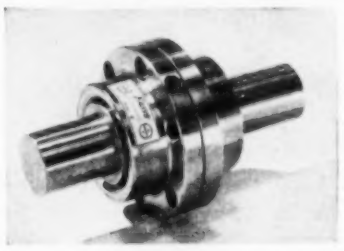
CONVEYOR BELT SIDE CHAIN increases capacity of belting



Handling capacity of May-Fran hinged steel scrap conveyor belting is increased with application of side chain available in 2½, 6 and 9-in. pitches. Working load capacities range from 1250 lb per strand for the 2½-in. pitch size up to 6750 lb for the 9-in. pitch size. Chain can also be utilized for slat or apron conveyors as well as drag and open type chain conveyors. Extensive number of combinations or roller diameters and side bar sizes can be furnished to meet individual requirements. Made by **May-Fran Engineering, Inc.**, 1711 Clarkstone Rd., Cleveland 12, O.

▲ For more details circle NED-576 E5 on enclosed inquiry slip ▲

GEAR TYPE COUPLING for light to medium drive units



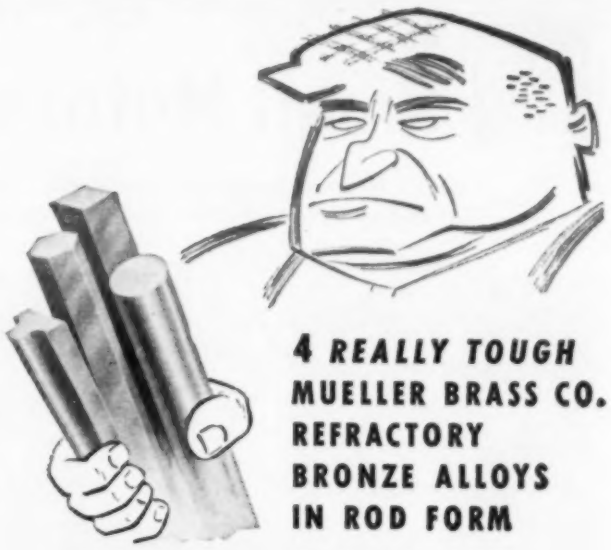
Shaft sizes up to 2⅝ in. can be accommodated by the Fast's model B gear type coupling, made for light to medium drive units. Low priced, self-aligning unit is suitable for small pumps, compressor drives, fans and conveyors. Design provides a dust and moistureproof seal and permits angular, offset or angular and offset misalignment. Three sizes with maximum bores of 1⅝, 2⅛ and 2⅝ in. have capacities of 7, 15 and 27.5 hp per 100 rpm, respectively. Maximum speeds are 12,000, 9300 and 7900 rpm. Made by **Koppers Co.**, Metal Products Div., 280 Scott St., Baltimore 3, Md.

▲ For more details circle NED-577 E5 on enclosed inquiry slip ▲

HEAT TREATING FURNACE uses protective gas atmosphere

Designed for general hardening of tool steels, carburizing and similar operations, this heat treating furnace produces steel that is clean and free from decarburization. Atmosphere system consists of a cracking unit to which is fed, by means of a variable speed pump, a mixture of alcohol and water proportioned according to the type of treatment desired. Mixture is cracked into gas of controlled analysis to maintain the correct carbon potential. The tightly sealed, general purpose furnace has a 8 x 6 x 14-in. chamber and a foot treadle-operated door. Made by **Cooley Electric Mfg. Corp.**, Dept. F-3, 38 Shelby St., Indianapolis 7, Ind.

▲ For more details circle NED-578 E5 on enclosed inquiry slip ▲



4 REALLY TOUGH MUELLER BRASS CO. REFRACTORY BRONZE ALLOYS IN ROD FORM

"TUF STUF" ALUMINUM BRONZE
"600" SERIES BEARING BRONZE
MANGANESE BRONZE
ALUMINUM SILICON BRONZE

These four Mueller Brass Co. alloys have been specifically formulated to meet the demands of applications where manufactured parts must stand up under the most adverse operating conditions. As specialists in brass and bronze alloys, the Mueller Brass Co. can offer you the exact alloy best suited to meet the requirements of any application problem. Write us today for details.

155

MUELLER BRASS CO. PORT HURON 27, MICHIGAN

▲ For more details circle NED-579 E5 on enclosed inquiry slip ▲

HOLDS NON-MAGNETIC MATERIALS ON MAGNETIC CHUCK

*Magna-Vise**

(. . . a pair of spring-loaded clamps, actuated by magnetic pull of the chuck, hold material firmly against chuck face.)

*Patented

NEW LOW PRICES!

Model	Length	Width	Thick	Dia.	Price*
6	6⅜"	1 9/16"	9/64"	⅞"	$26.00
6A	6⅜"	1 9/16"	1/16"	⅞"	28.00
10	10"	1 9/16"	9/64"	⅞"	35.00
14	14"	1 9/16"	9/64"	⅞"	52.50

*F.O.B. Big Rapids, Michigan

ORDER TODAY, DEPT. ND-55

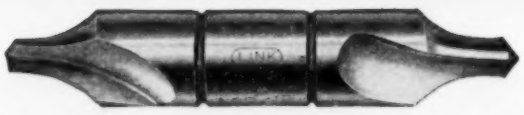
Magna-Lock magnetic chucks and devices.

MAGNA-LOCK, INC.

BIG RAPIDS, MICHIGAN, U. S. A

▲ For more details circle NED-580 E5 on enclosed inquiry slip ▲

FAR LESS TIP BREAKAGE with "RING SEAT" CENTER DRILLS



USE "RING SEAT" CENTER DRILLS

IF YOU GRIND BETWEEN CENTERS

The "R" type, curved contour Ring Seat center drills give you a stable, accurate, precision center, quickly restored after heat-treat.

Ring Seat center drills produce a protected center at no extra cost—and carry a built-in discount because they last longer.

Lapping Centers After Heat Treat

is a simple quick operation, done in about one-third the usual time. Lapping with a rotating felt wick removes heat scale and restores a perfect center—at the original place.

A PREMIUM DRILL AT NO EXTRA COST

Ideal for Turning Tapers

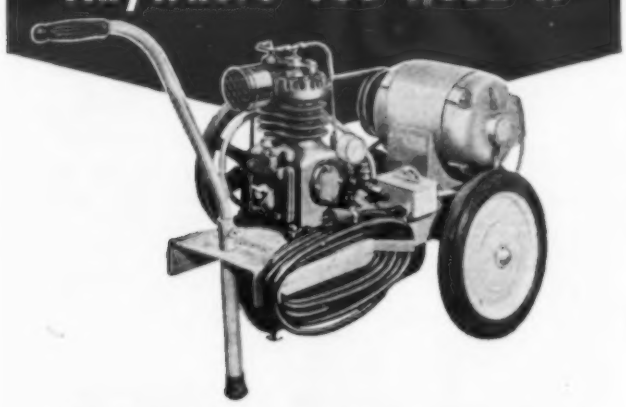
LINK INDUSTRIES

13838 Elmira Detroit 27, Mich.

FREE CIRCULAR

▲ For more details circle NED-581 E5 on enclosed inquiry slip ▲

Have Compressed Air Anywhere You Need It



New DeVilbiss Portable Air Compressors bring air to the job for spray painting, air tools, emergency service, or on-the-spot air supply. Available in ½ or 1 hp class, gas and electric models. Delivered pressure 60 or 100 pounds. Can even be carried in the trunk of your car. Write today for full details.

DEVILBISS

THE DEVILBISS COMPANY
Toledo, Ohio

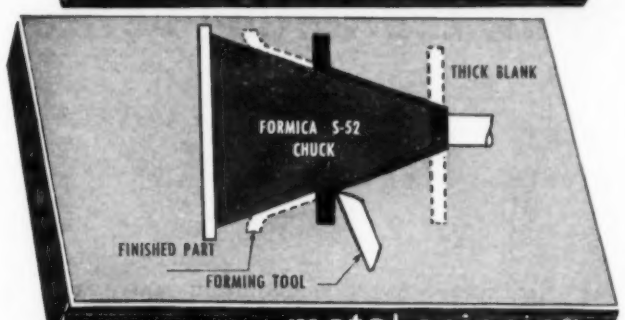
Santa Clara, Calif. • Barrie, Ontario • London, England

▲ For more details circle NED-582 E5 on enclosed inquiry slip ▲

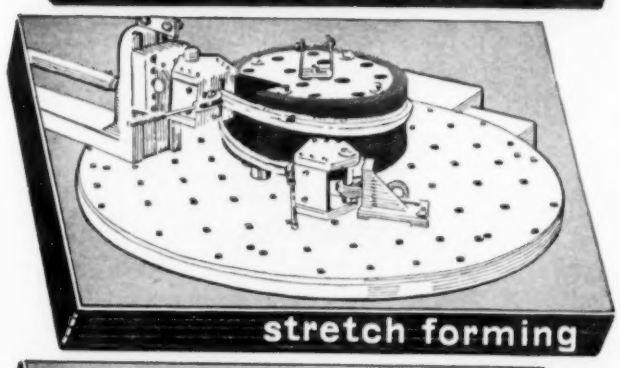
Formica S-52

laminated plastic die stock

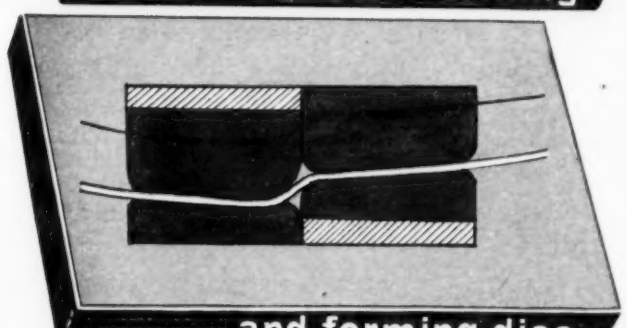
is better for...



metal spinning



stretch forming



and forming dies

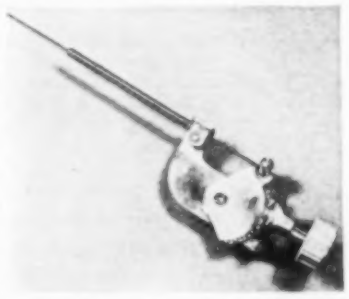
Formica S-52 is strong—8 times stronger than hard maple in dent resistance. It's **easy to machine**—with conventional metalworking tools. It's **smooth** the slick-as-glass surface forms without transferring any surface irregularities. It's **inexpensive**—cheaper than steel to buy, much cheaper to machine. Write today for descriptive S-52 folder.

Productive FORMICA Pays in Performance

The Formica Co.
4671 Spring Grove Ave.
Cincinnati 32, Ohio

▲ For more details circle NED-583 E5 on enclosed inquiry slip ▲

REMOTE CONTROL
operates dampers, vents and valves



This sector gear and pinion device, together with wire type flexible control is designed for remote operation of auto heater vents and valves, dampers on air conditioning units and similar applications. It will produce 1½ in. of linear push-pull motion by turning knob 270 degrees. External portion occupies only 1¾ x 1¼ in. of panel area with 2½-in. clearance behind panel. One nut is required for mounting. Constructed of plated steel, unit is unaffected by dust or grit. Made by **Arens Controls, Inc.**, 2025 Greenleaf St., Evanston, Ill.

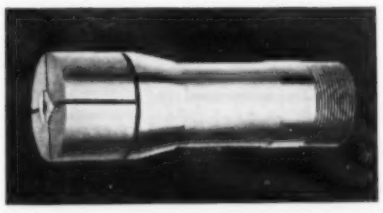
▲ For more details circle NED-584 E5 on enclosed inquiry slip ▲

PORTABLE WIRE STITCHER
joins up to ⅛-in. thick materials

Weighing only 59 lb, this portable wire stitcher has operating flexibility for closing bags of Cellophane, single or multiwall kraft paper, plastic, foil or waxed paper; for attaching bags to cards; assembling light chipboard boxes or fastening labels to merchandise. Machine draws wire from a continuous 5-lb reel. It cuts wire to proper length, forms stitches and clinches them at 200 per minute in up to ⅛-in. thick material. Powered by 1/20-hp fan-cooled motor, machine is actuated by electric foot switch or work-actuated trip. Made by **Acme Steel Co.**, 2822 Archer Ave., Chicago 8, Ill.

▲ For more details circle NED-585 E5 on enclosed inquiry slip ▲

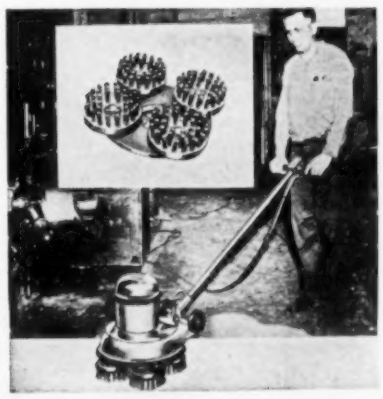
INTERNAL COLLETS
for use on lathes, tool grinders



Equally effective on lathes, tool and cutter grinders, and cylindrical grinders, these internal collets are self-releasing and fit standard 5C lever and hand-wheel drawbars. All parts and pads are hardened and ground for maximum accuracy. Tolerances up to 0.0001-in. are easily achieved by touch-grinding pads or using machinable pads with given setups. Collets and pads are available individually or in the new Task Master set packaged in Walnut case. Set consists of master internal collet, integrated set of hardened pads from 7/16 to 1 in. in increments of 1/32-in. and semihard RC20 machinable pads from 7/16 to 1 in. in 1/16-in. increments. Made by **Royal Products**, 82 Union St., Mineola, L. I., N. Y.

▲ For more details circle NED-586 E5 on enclosed inquiry slip ▲

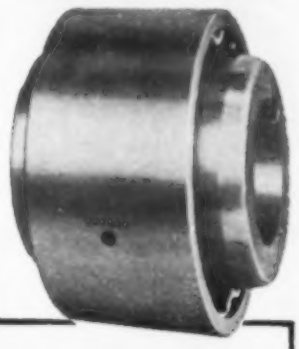
DRY SCRUBBING MACHINE
exerts 150 lb pressure on floor



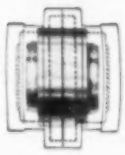
Heavy grease accumulations and ground-in dirt and grime can be removed dry by K-17 heavy duty scrubbing machine which exerts 150 lb pressure on floor. Four individual ball-bearing mounted brush units perform the dry scrubbing action. Machine features "balanced-power" design which counterbalances handle weight, minimizes sideways pull of motor and provides easy-to-control steering. Floating power device is incorporated in gear to absorb shocks. Enclosed ¾-hp motor is dust and waterproof. Detachable handle is adjustable to operator's height. Toggle switch on handle and 50-ft 14-gage three-conductor cable are standard. Made by **Kent Co.**, 827 Canal St., Rome, N. Y.

▲ For more details circle NED-587 E5 on enclosed inquiry slip ▲

3 BIG SAVINGS for your Direct Drives



SAVE SPACE
3/5 usual size—allows more compact designs—no bulky flanges—one-piece, smooth sleeve transmits the whole load.



SAVE WEIGHT
1/2 usual weight—lower moment of inertia—less strain on shafts, bearings, armatures. Smaller precision teeth distribute load evenly.

SAVE ASSEMBLY TIME
Only 7 parts—no nuts and bolts—assembled, uncoupled in seconds—speeds up alignment checks—simplifies parts, tool problem.

Consult "yellow pages" for local representative—send for CATALOG.
Sier-Bath GEAR & PUMP CO., INC
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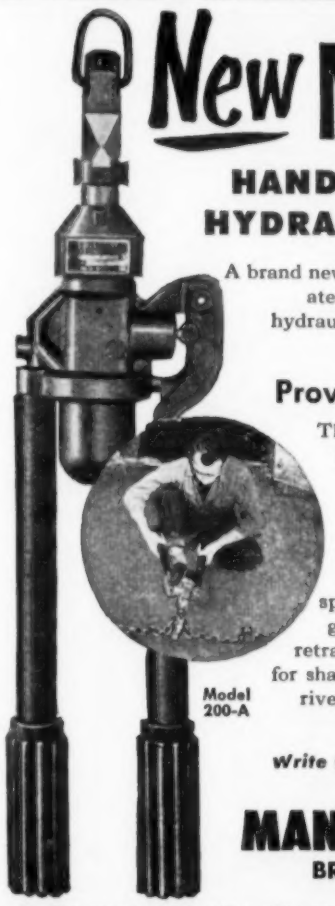
50th Anniversary • Member A.G.M.A.
Also Mfrs. of Precision Gears, Rotary Pumps

Sier-Bath Flexible GEAR COUPLINGS

▲ For more details circle NED-588 E5 on enclosed inquiry slip ▲

New MANCO

HAND-OPERATED HYDRAULIC CUTTER



A brand new development in hand-operated cutting tools. Tremendous hydraulic cutting force produced by easy hand-pump action.

Provides 10 Tons Thrust

The powerful, yet compact and relatively lightweight Manco Hydraulic Cutter bites right through ½" reinforcing rod, chain, bolts, etc. Unique dual ratio pump affords rapid traverse for speed of cut. Twist of handle grip provides automatic blade retraction. Blades easily removed for sharpening. Can be adapted for riveting, crimping, punching, etc. Weight 15 lbs. Length 24".

Model 200-A

Write for complete information

Dept. NED-5
MANCO MFG. CO.
BRADLEY, ILLINOIS

▲ For more details circle NED-589 E5 on enclosed inquiry slip ▲

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LAWN TRIMMER? Our "Custom-Built Motor Service" has helped leading manufacturers of grass trimmers *cut costs* and keep sales moving at a *fast clip!* Scruggs Motors were designed to their specs . . . and complete satisfaction.

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THE ACROMARK COMPANY
7-11 MORRELL ST., ELIZABETH, NEW JERSEY

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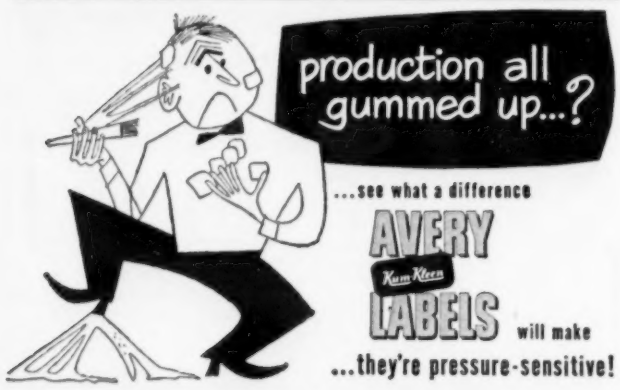

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Company_____
Address_____
City_____ State_____

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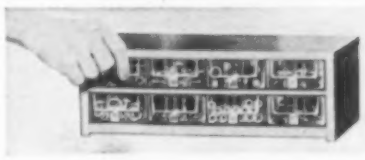
PLASTIC-DRAWER CABINET for small-parts storage applications



Eight transparent See - Thru drawers in this 4 x 12 x 6-in. cabinet provide means for protective yet accessible storage of small parts and components. Adjustable cross-wise and length-wise dividers permit setting up various size compartments in the individual drawers. Safety catch permits drawers to hang out in open accessible position. Slots are provided for labels. Cabinet is finished silver-grey enamel and has protective rubber feet. Price is $4.25. Distributed by **General Industries Co.,** Dept. NED, 5738 N. Elston Ave., Chicago 30, Ill.

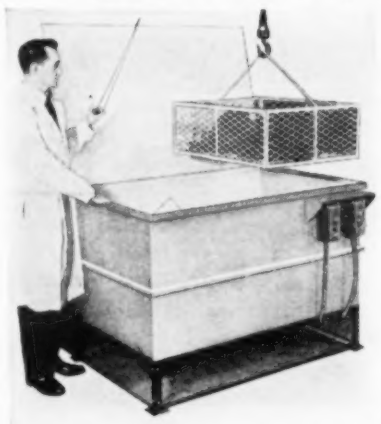
▲ For more details circle **NED-594 E5** on enclosed inquiry slip ▲

GAS CYLINDER GRAB for use with electric hoist

Bottle grab shown in illustration is made in various sizes for different kinds of bottled gas cylinders. It is made for use with the Pacific truck - bed hoist which derives its power from the truck's storage battery. A barrel grab for use on steel drums is also available. Hoist has a 1000-lb capacity and is remote pushbutton controlled. Made by **Burtchaell Heating Co.,** Hoist Div., 2945 S. E. Powell Blvd., Portland 2, Oreg.

▲ For more details circle **NED-595 E5** on enclosed inquiry slip ▲

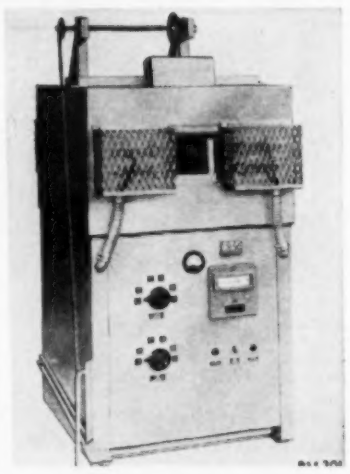
PARTS CLEANING MACHINE impellers driven by 1½-hp motors



Top of the model 40 Turbo-Blast parts cleaning machine is only 40 in. from the floor, facilitating loading and unloading from either side or front. Two parts baskets hold from 3 to 5 motor blocks or the equivalent at one time. Cleaning time for a capacity load is 20 minutes. Tank size is 5 x 3 x 2 ft, solution depth is 18 in. (185 gal) and heating may be by gas or steam. Impellers are driven by two 1½-hp single-phase motors. Heat is thermostatically controlled. Made by **Storm-Vulcan, Inc.,** P. O. Box 6653, Dallas 19, Tex.

▲ For more details circle **NED-596 E5** on enclosed inquiry slip ▲

HIGH TEMPERATURE FURNACES operate continuously at 2500, 2800° F



Tap - changing transformer with 36 steps is located in housing under Rad-O-Glow Globar furnaces, available in bench and floor models for continuous operation at 2500° F or 2600° F intermittently. Models for continuous use at 2800° F are also available. All models feature extra heavy insulation, ammeter for measuring power input and controls totally enclosed and factory wired to NEC specifications. Foot actuated vertical lift door is standard on floor models. Three sizes are available for operation on 220 v, single-phase, 60 cycles. Made by **Blue M Electric Co.,** 138th & Chatham St., Blue Island, Ill.

▲ For more details circle **NED-597 E5** on enclosed inquiry slip ▲

Write for your copy WASSCO'S Glo-Melt Resistance Soldering Bulletin #105-F 54

Get your copy of this handy, informative resistance soldering bulletin and catalog of the entire WASSCO line. Includes details and data on a variety of specialized soldering devices for every production need. Write for your copy today!

pencil handpiece
#10520: An extremely lightweight small handpiece ideal for soldering where extreme precision or control is paramount. 5" long; weight, ½-oz. Uses ⅛" carbon tips. 5' lead included.

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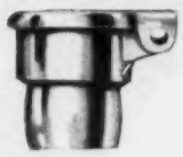
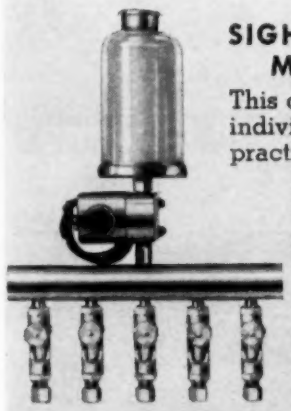
GITS

Provides

Low-Cost Replacement Of YOUR Lubricating Devices



OIL HOLE COVERS
This model is designed to fit into a simple drilled hole. Ideal for use on small motors, generators, starters and light machinery—for dependable oil hole protection at moderate cost. Larger sizes frequently used as filler caps on tanks or reservoirs. Style R—No. 305.



SIGHT GRAVITY FEED MULTIPLE OILERS
This one unit replaces 3 to 8 individual oilers. Maximum practicality in a small central lubrication system. Positive cut-off during idle periods. Individual vibration-proof needle valve adjustments. With solenoid control (Illustrated): Style MDS—No. 4685-A. Without solenoid: Style MD.

Too much machine "down-time"? Too much time wasted in servicing your machinery? Perhaps some old, worn lubricating devices need replacement. Maybe a different, more modern device will do the job more efficiently. Whenever you replace, specify GITS Lubricating Devices—the widest selection available anywhere, right in stock. The items pictured above are only a few of our many thousands of lubricating devices. Send NOW for your free Catalog.

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Chicago 23, Illinois

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Over 16,000,000 cycles without wear or loss of accuracy... how many more will they complete?

Several Ames Model 282 Long Range Dial Indicators *with plain bearings* are currently giving an amazing demonstration of performance and endurance under test conditions. After more than 16,000,000 cycles each, at 240 strokes per minute, 9 hours a day—they still have their original accuracy!

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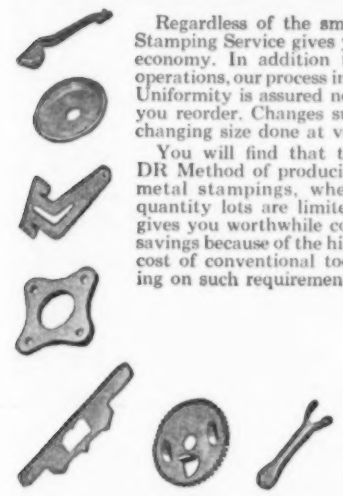
METAL STAMPING SERVICE

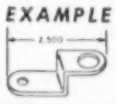
AT LOWEST POSSIBLE DIE COST



Regardless of the small quantity needed, DR Stamping Service gives you quality, accuracy and economy. In addition to blanking and piercing operations, our process includes forming operations. Uniformity is assured no matter how many times you reorder. Changes such as relocating holes or changing size done at very moderate cost.

You will find that the DR Method of producing metal stampings, where quantity lots are limited, gives you worthwhile cost savings because of the high cost of conventional tooling on such requirements.

EXAMPLE



$22.60 for first 100 pieces including tools. $4.10 for each additional 100 pieces. Plus actual market price of material for stamping.

***Send** us a blueprint of your stamping needs and we will send quotation.*

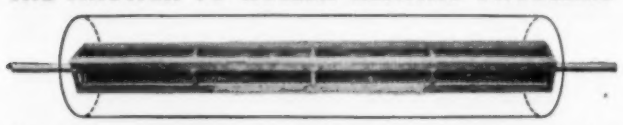
DAYTON ROGERS
Manufacturing Company

Minneapolis 7E, Minnesota

▲ For more details circle **NED-601 E5** on enclosed inquiry slip ▲

TRENT "FOLDED-AND-FORMED" HEATING UNITS

THE ANSWER TO ROLLER HEATING PROBLEMS



When you're faced with the problem of drying paper, heating wax, glue or asphalt on rollers, you'll find your solution through the faster, higher, more uniform radiant heat furnished only by Trent "Folded-and-Formed" Roller Heating Units.

HERE'S WHY—

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Drying • Curing • Embossing • Evaporating

are accomplished faster, more effectively, and with greater economy through the performance of Trent "Folded-and-Formed" heating elements. They are constructed to assure maximum rigidity for long life and easy maintenance even under hardest use. They pay off in—

- **GREATER PRODUCTION**
- **HIGHER QUALITY**
- **LOWER COST**

Trent Engineering Service

An experienced Trent engineer will gladly survey your requirements to help you determine the most efficient, economical approach to your heating problems. In the meantime, write for the new Trent "Folded-and-Formed" Heating Element Booklet.

TRENT INC.
Electrically Heated Industrial Equipment
247 LEVERINGTON AVE., PHILA. 27, PA.
In Canada: Supreme Power Supplies Limited, Toronto 14

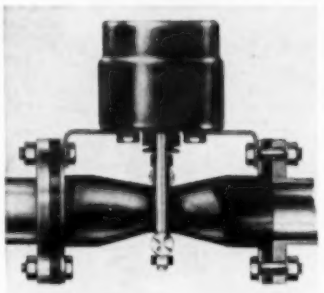
▲ For more details circle **NED-602 E5** on enclosed inquiry slip ▲

FLEXIBLE SHAFT SANDER
is lightweight portable machine

Minimum of arm fatigue results from use of this portable model 500 flexible shaft sander of the variable orbital oscillating type. It is usable on overhead, wall, bench or floor operations for both sanding and polishing. Weight of sander head is only 2½ lb. Motor is carried by handy shoulder sling, or it can be mounted on overhead trolley for production line or bench work. Made by **Junior Tool Co.**, 975 W. First St., Azusa, Calif.

▲ For more details circle **NED-603 E5** on enclosed inquiry slip ▲

PINCH TYPE VALVES
for wet or dry corrosives, slurries



Line of straight-through flow pinch type valves is available for handling corrosive materials or abrasive slurries, wet or dry. They consist of a flanged rubber body and self-supported air-operated pinching mechanism. Series Rx high pressure and Rz low pressure valves provide bubble-tight shut-off and are offered with either positioner for flow control or without positioner for on-off service. Rolling diaphragm type air motor is rated for 125 psi operation. Valve sizes are from ¼ to 14 in. for maximum of 100 psi line pressure and 180° F operating temperature. Made by **R. K. L. Valve & Mfg. Co.**, Dept. 6, 1623 Elaine St., Philadelphia 19, Pa.

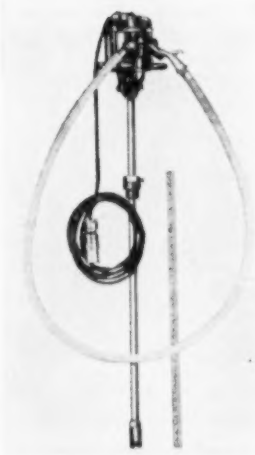
▲ For more details circle **NED-604 E5** on enclosed inquiry slip ▲

PORTABLE CHEMICAL TANKS
withstand attack by many corrosives

Offered as economical substitute for complex piping systems, portable storage-transfer tanks are made in capacities from 200 gal upward on either skids or casters. Units are particularly suitable for service involving intermittent or varying requirements for heavy acids or industrial chemicals in different plant areas. They are also usable as temporary storage during repair or cleanout of permanent storage equipment. Tanks are available with a variety of sheet linings or coatings for protection against a wide range of corrosive elements. Made by **Heil Process Equipment Co.**, 12902 Elmwood Ave., Cleveland 11, O.

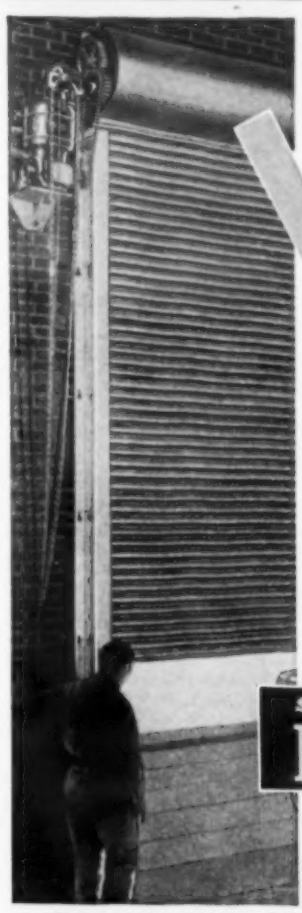
▲ For more details circle **NED-605 E5** on enclosed inquiry slip ▲

MOTOR-DRIVEN BARREL PUMPS
capacity is 9 gpm at 3-psi discharge



Intended for use with fuel, oil, alcohol and other hydrocarbon fluids, Series RG-10800 barrel pumps are portable or stationary electric-driven units designed to replace hand-operated pumps. They are equipped with required vertical suction pipe and depth-adjustable bung threaded for 1½ and 2-in. openings; brass foot valve with ⅛-in. mesh screen; discharge assembly of reinforced gasoline hose with nozzle; and vacuum breaker for thorough hose drainage. Pump ports are tapped ¾-in. NPT. Capacity for these self-priming, positive displacement units is 9 gpm at 3 psi discharge. Explosionproof motor is 1/6-hp, 115-v ac, 3450-rpm unit built integral with rotary, three-blade pump. Made by **Lear, Inc.**, Lear-Romec Div., 1440 Abbe Rd., Elyria, O.

▲ For more details circle **NED-606 E5** on enclosed inquiry slip ▲



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Originated by Kinnear, the interlocking steel-slat door meets any door need—large or small, in old or new buildings. Opening upward, it coils above the lintel **inside or outside** the building. It offers solutions to almost any "headroom" problem. It needs no "reserved space" for opening or closing action—all floor and wall areas around the door are fully usable all the time. Manual or motor control. Write today for full details.

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Offices and Agents in All Principal Cities

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WOVEN WIRE

SLINGS

FOR EASIER AND SAFER

handling

or processing

EXTRA BROAD bearing surface gives greater strength, stability and maneuverability . . . even while moving heavy, bulky loads from point to point or through processing operations. Use either BASKET or CHOKE HITCH.

ONE MAN can fasten the load and operate the hoist. No fighting with kinks or tangles. No dangerous whipping or snarling of loose ends. Smooth woven wire construction eliminates sharp loose strands.

COMPLETE FLEXIBILITY gives greater gripping power around even the smallest loads . . . lets you store Gripper Slings in compact coils or hang them perfectly flat on the wall. All-metal construction means long life, freedom from damage even by sharp edged loads.

AVAILABLE in standard lengths and widths, capacities up to 100,000 lbs. Special sizes on request. Every sling PRETESTED to meet loading specifications.

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OFFICES IN PRINCIPAL INDUSTRIAL AREAS

DISTRIBUTORS—write for open territory data!

▲ For more details circle **NED-608 E5** on enclosed inquiry slip ▲

Edmont Case No. 479: Handling steel on various operations, Edmont No. 30 plastic palm coated gloves outwore canvas 10 to 1 and saved over 80% in replacement costs.

Job-fitted gloves outwore canvas 10 to 1

No. 30 palm coated, one of 54 styles

You can save money for your company or your employees, and reduce hand injuries, with gloves designed for your work. For handling all types of abrasive, sharp or slippery materials, or where oil, grease, acids, caustics, solvents or thermal extremes are present, modern Edmont job-fitted gloves far outwear old-fashioned canvas, leather or ordinary coated gloves, and average 40% to 70% cost savings. They also result in easier work handling.

FREE TEST OFFER: Send description of your operation. Without charge, we will send recommended gloves for you to test.

Edmont JOB-FITTED GLOVES

Edmont Manufacturing Company, 1240 Walnut Street, Coshocton, Ohio

▲ For more details circle NED-609 E5 on enclosed inquiry slip ▲

specify standard

HALLOWELL SHOP DESKS

HALLOWELL FEATURES
- Smooth steel writing surface
- Easy gliding drawers
- Recessed drawer pulls
- Baked-on enamel finish
- Functional design, neat appearance

Standard units with *standard* interchangeable parts permit you to *custom build* HALLOWELL Shop Desks to fit your requirements. And these desks are stocked by leading shop equipment dealers. Write for literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

HALLOWELL SHOP EQUIPMENT DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-610 E5 on enclosed inquiry slip ▲

S-T-R-E-T-C-H

Your Honing Dollars by putting them in Superior's NEW COMBINATION PEDESTAL MODEL JCP HONING MACHINE AND COOLANT UNIT

- ★ Hones over keyways, spline gears and most broken surfaces.
- ★ Counter-balanced foot pedal adjustable to any desired pressure.
- ★ Expandable splash tray on coolant unit affords an additional 10-inch extension for long work. Keeps oil splash and mist off the floor and operator's feet.

AMAZING SAVING OF TIME

- ★ Spindle speeds variable from 400 to 1000 r.p.m. without changing belts.
- ★ Honing range from .120 to 2.500. No adapters required.
- ★ Mandrels or stones changed without tools. All mandrels fit to the spindle with bayonet lock.
- ★ Flexible coolant hose can be accurately aimed at any point. Nozzle adjustable to an oil flow that exactly fits the needs of any job.
- ★ Coolant unit quickly disassembled for easy, complete cleaning.
- ★ Beautifully finished in baked enamel.
- ★ Height: 60 1/16". Width: 33 1/16". Depth: 31", 41" with extension pan open.

Although this 10-Star honing equipment is the finest that money can buy, the price is amazingly low—much less than you'd believe possible. The cost of NOT installing it now is the important consideration.

SUPERIOR HONE CORPORATION

1613 Elrene Street Elkhart, Indiana

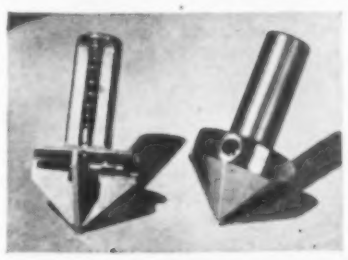
Use coupon today to get free literature.

Please send free catalog and prices on Superior Honing Machines.

Name_____
Firm_____
Street_____
City & State_____
Name of Supplier_____

▲ For more details circle NED-611 E5 on enclosed inquiry slip ▲

DEBURRING TOOL
for 1/8 to 1-in. diameter holes



Operating without chatter in any conventional drill press or similar machine this tool will deburr holes from 1/8 to 1 in. diameter in any machinable material. Regulating the protrusion of the cutter blade beyond the tool body with an adjusting screw controls feed or thickness of chip being removed. Cutter blade floats in proper alignment to equalize the chips being removed. Made by **Randles & Reynolds Machine Co.**, Alpena, Mich.

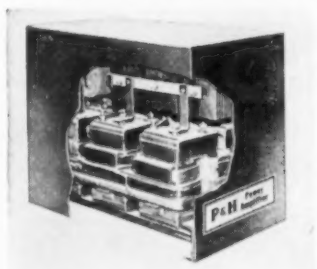
▲ For more details circle NED-612 E5 on enclosed inquiry slip ▲

VACUUM PHOTOTUBE
for critical industrial applications

Industrial applications which are critical as to microphonics and sensitivity gradient are uses of the No. 6570 vacuum phototube. It can be employed for such purposes as electronic beverage inspection and ampul inspection equipment. Tube has high sensitivity to red and near-infrared radiant energy, making it suitable for use with an incandescent light source. Maximum anode supply voltage rating is 500 v and maximum average cathode current rating is 5 microamperes. Average luminous sensitivity is 30 microamperes per lumen. Made by **Radio Corp. of America**, Tube Div., Harrison, N. J.

▲ For more details circle NED-613 E5 on enclosed inquiry slip ▲

POWER AMPLIFIER
provides variable dc power

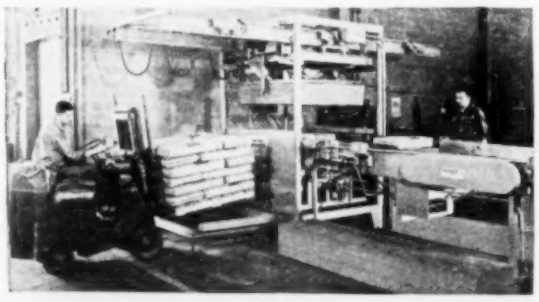


In operation, performance of this P&H power amplifier can be likened to adjustable voltage systems, except that unit does not have any rotating parts. It provides variable speed, stepless control. Input power can be any phase and voltage combination. Unit is designed around durable transformers, saturable reactors and rectifiers, and is self-contained. Control can be achieved electronically, by simple rheostat or any other variable arrangement. Amplifier is silent in use, has very rapid response factor and is available in wide speed ranges. Standard sizes range from 1 through 30 hp. Made by **Harnischfeger Corp.**, Electrical Products Div., 4621 W. National Ave., Milwaukee, Wis.

▲ For more details circle NED-614 E5 on enclosed inquiry slip ▲

PALLET LOADER
stacking patterns are adjustable

Bags, boxes, crates and similar packaged or unit products are automatically palletized by this pallet-loading machine. Simple suction pick-up lifts the



units easily. Machine is fed from a conveyor line and the pattern-laying is pushbutton controlled. Wide range of stacking patterns can be obtained. In palletizing multiwall bags, for example, device will handle an average of twelve 100-lb bags per minute, discharging them onto either of two pallet stations. Machine is equally suitable for unloading pallets and feeding packages onto a conveyor line. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

▲ For more details circle NED-615 E5 on enclosed inquiry slip ▲

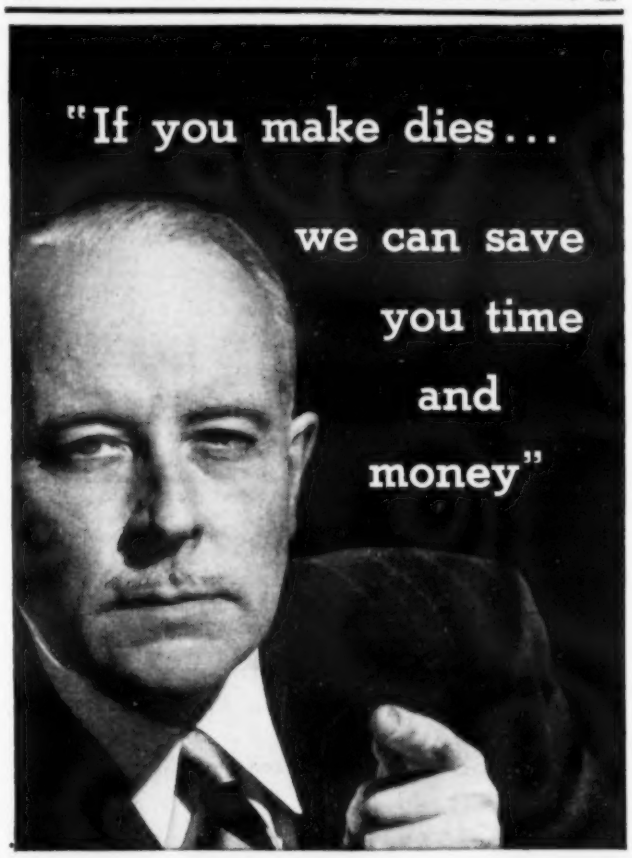
Only 12 minutes to drill 6¾" holes through 7½" reinforced concrete with TRUCO WATER SWIVEL and TRUCO SWIVEL DIAMOND DRILL BITS

Truco combination cut drilling time from half-a-day to 12 minutes per hole in department store water mains installation. Truco Swivel Diamond Bits in Truco Water Swivel drill reinforced concrete, granite, marble, brick, ceramic tile, etc. at amazing speed. Use with portable or stationary drills. Indispensible to masons, electricians, plumbers, maintenance crews. Can easily save entire cost on first job. Write for folder.

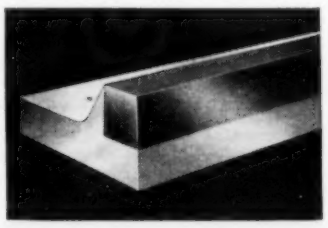
WHEEL TRUEING TOOL COMPANY

61-3200 West Davison Avenue • Detroit 38, Michigan

▲ For more details circle NED-616 E5 on enclosed inquiry slip ▲



You save time because OK Composite Die Sections are carried in stock for immediate shipment. Available for Cutting, Trimming and Forming Dies Order them cut to length or in bars 125" long. There are 11 standard cross sections with both wide and narrow lands.



You save money because you can buy them at a price far below what it would cost you to make them yourself. The soft steel backing, to which uniformly hardened steel is clad, is drilled quickly and economically for dowel and screw holes. Adjustments for wear are equally simple.

Companies now using OK Composite Die Sections report great time and money savings over competitive products formerly used.

For new bulletin on OK Composite Die Sections and Clad Aluminum Bronze Wear Plates, write Dept. 42-H.

THE OHIO KNIFE CO.

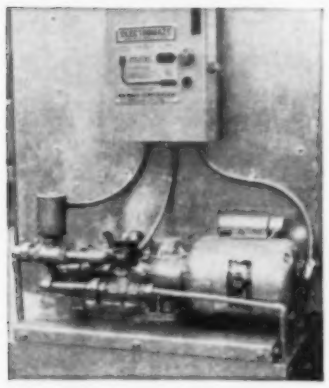
CINCINNATI 23, OHIO

Manufacturers for the Metal Working Industry of:
Slitter Knives • Shear Blades • Work Rest Blades • Cut-Off Blades • Hardened Spacers Hardened Ways • Gibs • Ball Races • Bronze Ways • Wear Strips

▲ For more details circle NED-617 E5 on enclosed inquiry slip ▲

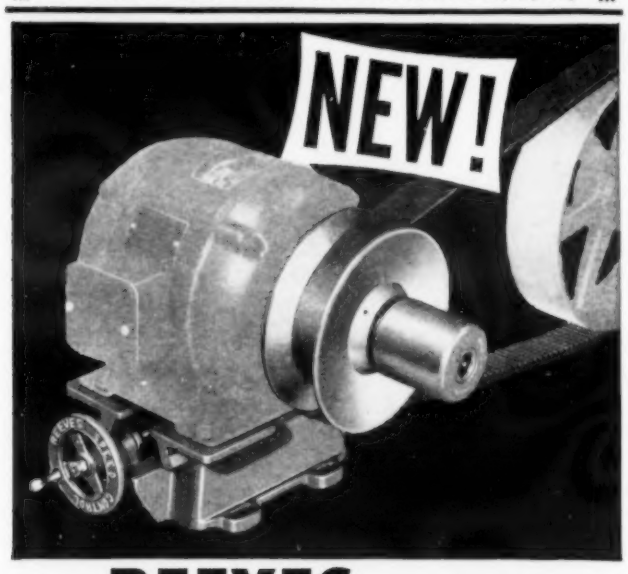
NEW AUTOMATIC SERVICE SYSTEM

cleans, recharges electronic air filter at push of button



The Electromaze electronic air filter is now available with a new built-in automatic service system. One push of a button starts a cleaning and recharging cycle. A series of jets pass back and forth underneath the filter. Vertical streams of water clean the filter, the ventilating blower dries it, then vertical streams of adhesive recharge it. A timer is also available which may be set to start the cycle automatically. A *semi-automatic* service system is available at lower cost. Uses a crank outside the duct to propel the jets back and forth. Oil reservoir and pump assembly furnished with both systems. Made by the AIR-MAZE CORPORATION, 25000 Miles Avenue, Cleveland 28, Ohio. *Advt.*

▲ For more details circle **NED-618 E5** on enclosed inquiry slip ▲



REEVES *Completely new redesigned* **MOTOR PULLEYS** *Smaller units—More HP!*

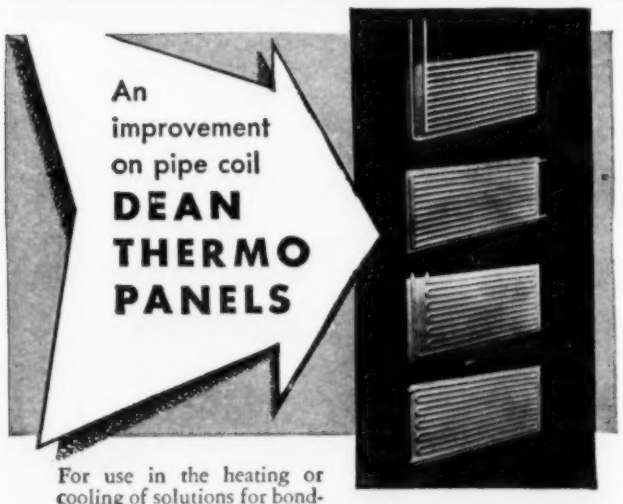
Check all these new REEVES features

1. New, smaller disc assemblies—engineered for new or old NEMA Motors.
2. New spiral-groove lubrication for rust-free, trouble-free service.
3. One-point lubrication when unit is stopped *or in operation.*
4. Superior base construction for greater rigidity and strength, reduced vibration and noise.

Write today for complete details. **Specify ND10C-V345.**

REEVES PULLEY COMPANY • COLUMBUS, INDIANA
Division of Reliance Electric and Engineering Co.

▲ For more details circle **NED-619 E5** on enclosed inquiry slip ▲



An improvement on pipe coil **DEAN THERMO PANELS**

For use in the heating or cooling of solutions for bonderizing, metal washing, degreasing, plating, etc. Low in first cost . . . light weight . . . space-saving . . . do away with expensive pipe coiling . . . provide efficient heat transfer.

Available in special shapes such as "U"s, "L"s, and cylinders . . . and in a wide range of materials, including iron, stainless steel, Monel and other special alloys.

Send for FREE bulletin giving facts and prices. **Dept. NE 5**

Manufacturers Representatives Wanted.

Write for details. Choice territories now open.

THERMO-PANEL DIVISION

DEAN PRODUCTS, INC. • 616 Franklin Ave., Brooklyn 38, N. Y.
STerling 9-5400

▲ For more details circle **NED-620 E5** on enclosed inquiry slip ▲

PARALLEL EDGE SCRIBER

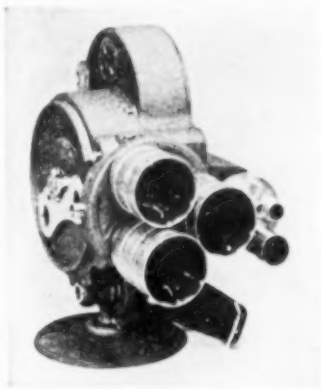
graduated in 16ths from 1/8 to 1 in.

Made from cold finished strip steel, this improved parallel edge scriber is stencil-engraved for scribing parallel lines on all sheet stock, including sheet synthetics, plywood and metal. It is graduated by 16ths from 1/8 to 1 in. and can be used by woodworkers as well as sheet metal workers. Scriber may be obtained free on company letterhead request to **Dayton Rogers Mfg. Co.,** 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

▲ For more details circle **NED-621 E5** on enclosed inquiry slip ▲

MOVIE CAMERA LENSES

wide field, high speed types



Wide field of view is combined with unusual speed in the 10-mm f/1.8 lens, made in France by Pierre Angenieux for 16-mm motion picture cameras. Short focal length gives added depth of field with close and distant objects being equally sharp. It is highly corrected for aberrational distortion, seeing straight lines straight and architectural images in true proportion. In industrial plants this lens will record an entire production line with a minimum of extra lighting. Second lens of same manufacture is a 1-in. f/0.95 lens which is fully color corrected and possesses very high speed with sharp definition and contrast. Its speed virtually eliminates necessity for extra lighting except for special effects. Distributed by **Bell & Howell Co.,** 7100 McCormick Rd., Chicago 45, Ill.

▲ For more details circle **NED-622 E5** on enclosed inquiry slip ▲

ALUMINUM CHAIN BLOCKS

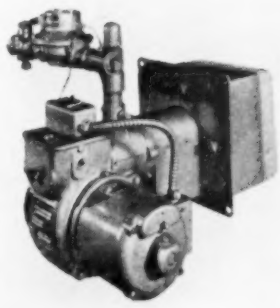
in 3 to 10-ton capacities

Low headroom, portability and easy operation are provided by Budgit Hi-Cap aluminum chain blocks available in 3, 4, 5, 6, 8 and 10-ton capacities. Blocks feature shock-resisting aluminum frames and covers, suspension arm cast integral with frame, splined connections, and alloy steel gearing and shafts supported on antifriction bearings. Gear design which distributes load on two sets of gear teeth, "full-jeweled" load brake and true vertical reeving are added advantages. Nonfracturing-type hooks will open slowly under extreme overloads. Nongagging four-pocket lift wheel enclosed by floating chain guide allows operation of hoist in any position. Made by **Manning, Maxwell & Moore, Inc.,** Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

▲ For more details circle **NED-623 E5** on enclosed inquiry slip ▲

PACKAGED INCINERATOR BURNER

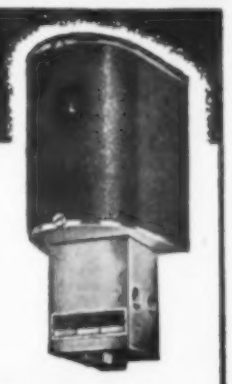
has 50,000 to 500,000 Btu range



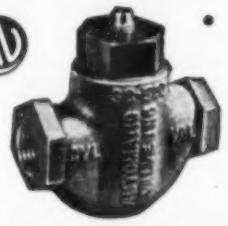
This small, packaged incinerator burner is designed to produce a slow, steady burn, with semiluminous flame. Capacity for one unit ranges from 50,000 to 500,000 Btu per hour. Flexibility of flame and heat output makes burner practical for quick adjustment to various needs. Assembly is complete and requires only connection of gas supply and electric motor control switch. AGA safety pilot assures main gas shut-off in event of pilot failure. Made by **Eclipse Fuel Engineering Co.,** 1002 Buchanan St., Rockford, Ill.

▲ For more details circle **NED-624 E5** on enclosed inquiry slip ▲

Solenoid VALVES



PILOT VALVES
3-WAY 4-WAY
For operating Master Valves and Small Cylinders



***Speed Control* VALVE**
Controls speed of Air and Hydraulic Cylinders

***3-Way and 4-Way* VALVES**
Pilot Operated
Sizes 1/4"—3/8" 1/2" and 3/4"
Write for Bulletin

AUTOMATIC VALVE CO.
37425 GRAND RIVER AVE., FARMINGTON, MICH.

▲ For more details circle **NED-625 E5** on enclosed inquiry slip ▲

Why this new RIDGID 500A Pipe and Bolt Threading Machine

is your long-time "bargain" in efficiency

Works like a Charm—new type Speed Chuck means fast chucking—guaranteed to hold any pipe, conduit or rod tight, forward and reverse! Jaws close and open easily by hand wheel . . . Cutting, threading, reaming tools operate independently, swing up out of way—short pipe can be chucked from front. Quick-opening Quadri, Dual, Mono and Bolt die heads quickly in and out, adjust to size right in machine.

Built like a Machine Tool—Last word in efficient design, easy operation, long service. Plenty of power. Capacity 1/8" to 2" pipe and conduit; 1/4" to 2" bolts—to 12" pipe with geared tools.

See it, try it—and you'll buy it!
At your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO, U.S.A.

RIDGID
Work-Saver Pipe Tools

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SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER
Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.
SIZES: 20" focal lgth. 1½ power – 14" focal lgth., 1½ power, 10" focal lgth., 2½ power; 8" focal lgth., 2½ power ..... price each ONLY 10.50

HYDRAULIC EQUIPMENT
We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.
SPECIAL
Gives 20,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 29 USED 29.95 NEW 43.95

OTC TOOLS
See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

NEW 10 TON HYDRAULIC PRESS
Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4¼" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. SIZE: 60" high 27" wide 29" base 129.00

HYDRAULIC HAND PUMP
Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

HYDRAULIC ACCUMULATORS
A-2B FLOATING PISTON TYPE – 4" x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50
NOTE: Stocks include bargains in Hydraulic Pumps – Valves – Motors – Boosters – as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG
OVER 320 PAGES
Packed with SENSATIONAL VALUES in GOV'T SURPLUS – FACTORY CLOSE-OUTS – and GENERAL MERCHANDISE. Fully priced and Illustrated. Thousands of items in Machine and Industrial Tools – Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES – PRICED TO SELL!

Palley SUPPLY CO. 2263 E. VERNON AVE., DEPT. NED-5 LOS ANGELES 58, CALIF.
Pay by M.O. or check. F.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

▲ For more details circle NED-627 E5 on enclosed inquiry slip ▲

for accurate Voltage Control of small ac machines

- No vibrating or sliding contacts to require attention.
- Special dust-proof design assures maximum protection.
- *Rocking Contact* sector gives quick regulation with small movement.
- Four simple connections and it's ready to operate.

Rocking Contact VOLTAGE REGULATORS

Only a small rocking movement of the contact sector over the curved commutator is required to cover the entire regulating range. Response is fast, accurate . . . sliding friction is eliminated, wear minimized.

V-00 regulator is used on ac generators with direct-connected exciters to 157 kva at 3600 rpm. Type 221 is used on ac machines with direct-connected exciters to 438 kva at 3600 rpm. These regulators can be modified for temperature compensation, shock mounting, or other special requirements.

Ask your A-C representative, or write Allis-Chalmers, Milwaukee 1, Wisconsin, for Bulletin 14B6143A.

A-4361 *Rocking Contact is an Allis-Chalmers trademark.*

ALLIS-CHALMERS

▲ For more details circle NED-628 E5 on enclosed inquiry slip ▲

CHOOSE FROM 115 MODELS TO MEET YOUR EXACT NEEDS!

Only Ballymore ROLL-OR-GRIP all-welded-steel ladders assure you of *just* the right portable safety stair for each need. A standard size range from one to twelve steps; a choice of three safety treads (expanded steel lath, steel grip-strut, or rubber-clad steel plate); optional hinged shelves or removable baskets; and a wide choice of widths within each size—these *extras* add convenience to the superior safety features built into every Ballymore — the original — safety-step ladder.

BALLYMORE Safety-Step LADDERS

Factory-trained representatives in principal cities

To: BALLYMORE COMPANY, WAYNE 3, PA.
( ) Forward free catalog of Safety-Step Ladders.
( ) Have representative call to survey my safety-ladder needs.
Name _____ Title _____
Company _____
Address _____

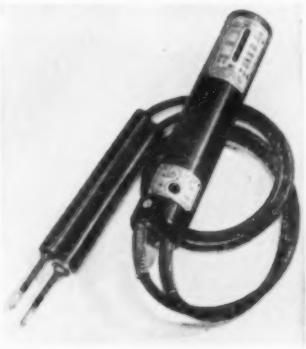
▲ For more details circle NED-629 E5 on enclosed inquiry slip ▲

LIGHTWEIGHT HOIST
hand operated, has 1000-lb capacity

Specifically designed for airborne applications, this hand operated hoist has maximum load capacity of 1000 lb and accommodates 22 ft of 3/32-in. cable. It is driven with a standard ⅜-in. hex socket speed wrench and has installed weight of only 4.75 lb. Made by **Western Gear Works, P. O. Box 182A, Lynwood, Calif.**

▲ For more details circle NED-630 E5 on enclosed inquiry slip ▲

VOLTAGE TESTERS
for alternating and direct currents



Improved model SDP Knopp voltage testers tell whether the circuit is open or closed and indicate the nominal alternating current circuit voltages of 110, 220, 330, 440 and 550, and direct current circuit voltages of 115, 230 and 600. Direct current circuit polarity can be determined on model SDP-2 which, when vibrating and humming, indicates that the circuit is alternating current or unfiltered rectifier direct current. One of the stainless steel prods can be mounted in a socket in the top of the housing of either model. Made by **Electrical Facilities Inc.**, 4254 Holden St., Oakland 8, Calif.

▲ For more details circle NED-631 E5 on enclosed inquiry slip ▲

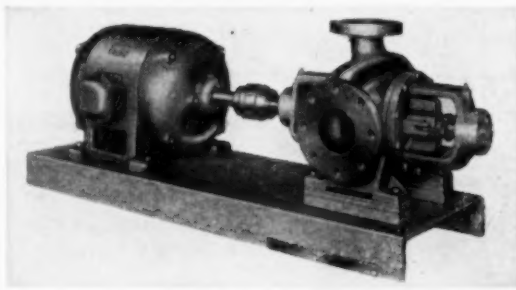
STAINLESS THREAD INSERTS
now offered in service kit form

Stainless steel wire thread inserts in the larger sizes are now available in service kits called Shop-Packs. Twenty-six such kits are offered, each containing a quantity of inserts, tap and inserting tool in a metal-edged box. Insert sizes range from 6-32 to 1½-6 in., both N.F. and N.C. series. The inserts provide strong, permanent threads that resist wear, corrosion, seizing and galling in iron and steel as well as in aluminum, magnesium, copper, plastics and wood. Offered by **Heli-Coil Corp.**, 1476 Shelter Rock Lane, Danbury, Conn.

▲ For more details circle NED-632 E5 on enclosed inquiry slip ▲

REGENERATIVE TURBINE PUMPS
designed for boiler feed service

Two-stage regenerative turbine pumps are designed for boiler feed service with boilers up to 1000 hp and operating at pressures up to 300 psi. Pumps

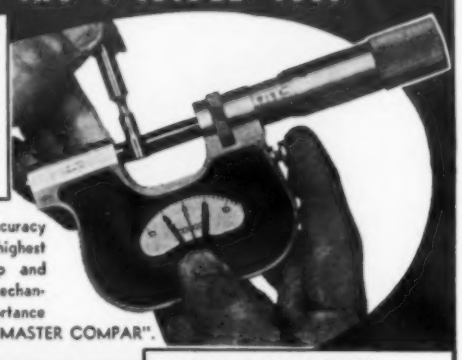


have low-pressure stuffing boxes obtained by use of throttle bushing under stuffing box and bleed-off arrangement back to low pressure area in the pump. This arrangement enables operator to pack for low pressures while pump is operating against highest obtainable differential heads. Balanced shaft loading is also provided by opposing discharge of first stage to discharge of second stage. Ten models in 2000 series and nine models in 3000 series are available in standard fitted, bronze fitted, all iron and all bronze construction. Shafts are stainless steel. Made by **Roy E. Roth Co.**, 2420 Fourth Ave., Rock Island, Ill.

▲ For more details circle NED-633 E5 on enclosed inquiry slip ▲

The "MASTER COMPAR" INDICATING MICROMETER COMPARATOR has the VISIBLE feel

No Arguments as to correctness of reading due to "feel". Use it as Comparator, Master Micrometer, Go & No Go Gage. 1" Range reading in 1/10,000"



To attain permanent accuracy at these close limits, highest precision workmanship and exclusive design of mechanism are of Major Importance and ONLY found in "MASTER COMPAR".

0-1" SIZE IN HARDWOOD CASE $95.00
Also Available in LARGER SIZES

A RIGHT HAND TOOL
Release button for movable Anvil on RIGHT Hand side enables you to hold tool the conventional way.
NEW—
Resetting to Zero in 5 seconds
Quick adjustable tolerance hands.
Heavy TUNGSTEN CARBIDE Anvils will actually measure Out-of-Roundness, Ovalness & Taper.

Ask for Illustrated Circular — Code GIOFF
Sold thru Tool Supply Houses
Ask for Demonstration

GEO. SCHERR CO., INC.
COMPLETE LINE OF PRECISION INSTRUMENTS
200 ND LAFAYETTE STREET • NEW YORK 12, N.Y.

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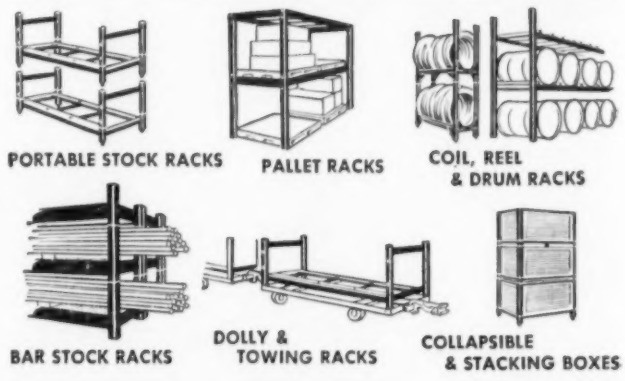
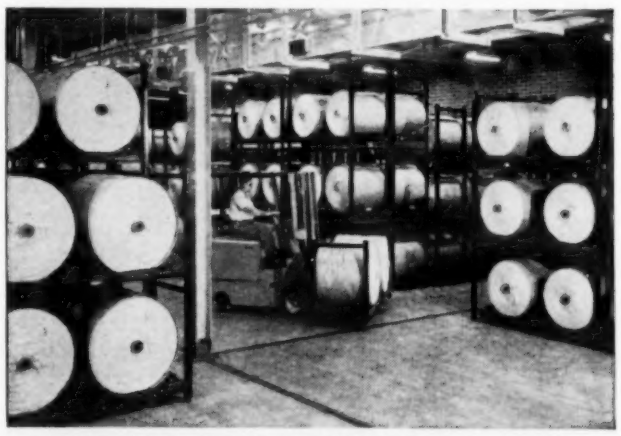
YOU CAN STACK ANYTHING ON E. M. I. RACKS



Protect workers and stock keep your materials . . .

well stacked!

Equipment Manufacturing storage racks that stack are fabricated of strong, square tubular steel and are adjustable to fit any space or unit load in your plant or warehouse. Special racks designed to your specifications. Field Engineering Service on any installation. Before you decide on a new warehouse, additional storage space or the purchase of stacking equipment, write for our catalog. You save money, space and time with E. M. I. racks.



E.M.I. Portable Stock Racks increase efficiency in storage and handling of thread at the plant of Coats & Clark, Inc., at Toccoa, Georgia.

Write for Catalog...

EQUIPMENT MFG. INC.
21566 HOOVER ROAD • DETROIT 5, MICHIGAN

• MATERIALS HANDLING EQUIPMENT
• STACKING RACKS FOR INDUSTRY

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Plans now filed like letters...

in **Art Metal PLANFILES**

Greater CONVENIENCE... PROTECTION...ECONOMY

● The first complete solution to the plan filing problem. Capacity up to 5,000 separate sheets...the equal of 30 plan drawers...in less than half the space and at less cost! Planfiles hold sheets *vertically* in suspended pockets up to 60" wide — spring compression keeps intermixed sizes in fixed position. Locate, remove, replace just like letters.

● The top is counter-balanced and a snap-out shelf permits reference and minor alterations without removal from file. Insulated double steel walls and overlapping joints protect contents from dust, water, fire. Mounted on casters, Planfiles can be located anywhere.

Complete details are in Planfile Catalog AD-2293. WRITE TODAY.

ART METAL CONSTRUCTION COMPANY, Jamestown 20, N. Y.

For 67 years the hallmark of the finest in office equipment and systems

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"144,000,000 parts per year

...no downtime. This is the record of production from our 7½ ton **benchmasters"!***

Here's a true story of Benchmaster performance! These four 7½ ton Benchmasters have worked continuously for a full year *producing a total of 144,000,000 parts* from 1" steel strip. Not one hour's press time has been lost for shut-downs!

Benchmaster reliability and high production are available in 1 ton, 4 ton, 7½ ton and deep throat models; also in plain and backgeared types.

Wherever you are, whatever you make, Benchmasters point the way to lower costs, higher production. Ask for details!

**From a satisfied Benchmaster user*

1835 West Rosecrans Avenue
Gardena, California

benchmaster — World's largest manufacturer of small punch presses and mills.

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REPAIR CONCRETE FLOORS AND USE THEM IN 45 MINUTES WITH Kwik-Roc!

Now you can repair cracks and holes in concrete floors while the plant is out to lunch. Use KWIK-ROC. It makes a floor patch that sets to rocklike hardness within 45 minutes of application. No need to hold up or detour plant traffic. When lunch is over it's all ready to use and abuse. Write for prices and detailed information.

A Subsidiary of Sun Chemical Corporation

A. C. Horn Co., Inc.
Dept. HB-568, Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION

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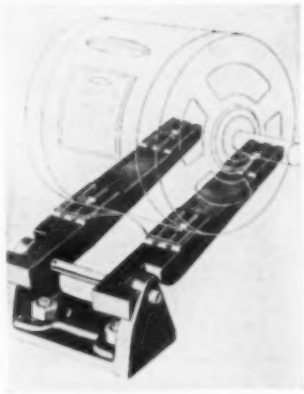
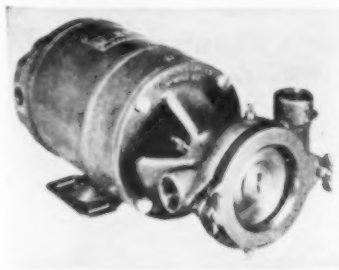
PIVOTED MOTOR BASE adjusts belt tension automatically



Line of four Auto-Tension motor bases can be used with flat or V-belt drives for motor frames from 1/6 to 7½ hp. It always maintains proper belt tension for all load conditions. They also compensate for belt stretch. Made by **Rockwood Pulley Mfg. Co.,** Dept. A, 20 Crosby St., New York 13, N. Y.

▲ For more details circle **NED-639 E5** on enclosed inquiry slip ▲

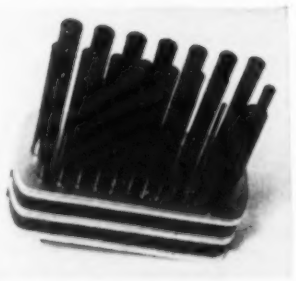
CORROSIONPROOF PUMP features Teflon-ceramic shaft seal



Broadened applications in handling corrosive liquids and slurries for the process industries are provided in this type No. 20 stainless alloy pump by use of a Teflon-ceramic seal. Gland is interchangeable with the Stellite-graphitized-carbon seal used on the standard pump. Pump can be used where temperatures do not exceed 160° F on continuous service. Capacity is 25 gpm with heads of 55 ft at 3450 rpm. Totally-enclosed impellers for clear liquids and semi-open impellers for slurries are available. Made by **Eco Engineering Co.,** Dept. NED, 12 New York Ave., Newark 1, N. J.

▲ For more details circle **NED-640 E5** on enclosed inquiry slip ▲

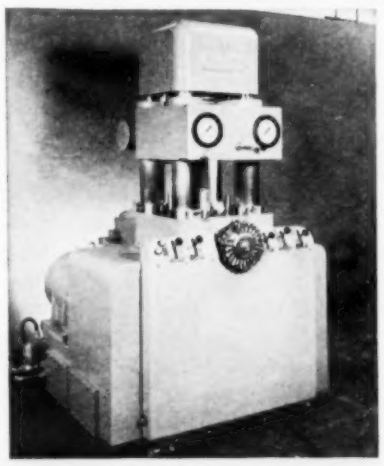
TRANSFER PUNCHES packaged as a matched set



Used by mechanics engaged in building or repair of precision dies or tools, the Spelmaco Spotter transfer punch is employed to transfer location of tapped, threaded, drilled or reamed holes. Desired size is inserted in hole and is tapped lightly with hammer. Punches are packaged as a matched set in a standard drill stand. Set No. 3-17 contains 28 punches. Sizes range from 3/32 to ½ in. in 1/64-in. increments and include a handy 17/32-in. size. All punches are 4⅞ in. long. Made of tool steel, punches have hardened and tempered working end. Made by **R. L. Spellman Co.,** Dept. 4, 406½ Miami St., Urbana, O.

▲ For more details circle **NED-641 E5** on enclosed inquiry slip ▲

HYDRAULIC FORMING MACHINE 8-in. model has 5-in. draw depth

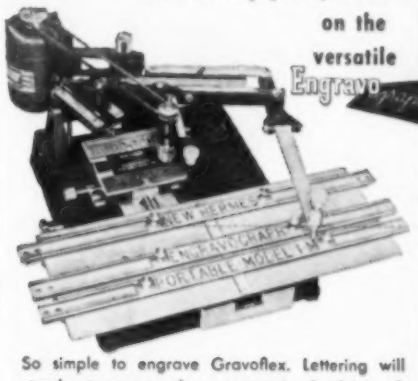


Addition to line of Hydroform machines is a model which will form parts from sheet metal blanks up to 8-in. diameter with a maximum draw depth of 5 in. Practically all sheet metals in gages up to ¼-in. steel can be drawn. Hydroforming embodies use of a male punch and a flexible die member backed up by hydraulic oil pressure which can be accurately controlled up to 15,000 psi. Maximum machine operating rate is 200 cycles per hour. It is a self-contained, floor mounted machine which measures 5 x 5 x 7½ ft and requires only water and electrical connections to be put in operation. Larger machines are made in 12, 19, 23, 26 and 32-in. blank diameter capacities. Made by **Cincinnati Milling Machine Co.,** Marburg & South Sts., Cincinnati 9, O.

▲ For more details circle **NED-642 E5** on enclosed inquiry slip ▲

THE NEW WAY TO MARK EQUIPMENT... with GRAVO flex

the first chip-proof, flexible engraving stock on the versatile Engravograph



So simple to engrave Gravoflex. Lettering will stand out permanently on contrasting background. No paint needed.

10,000 Engravographs in use for engraving on metals and plastics. Only the Engravograph has these patented features:

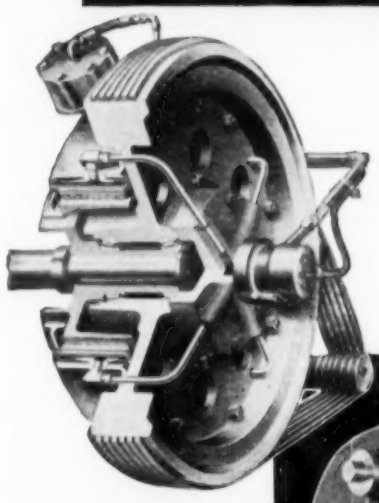
• **Adjustable for 15 ratios.** • **Self-centering holding vise.** • **Automatic depth regulator.** • **Adjustable copy holders.**

Send for booklets
Engravograph Booklet IM-26 · Gravoflex Booklet G-26

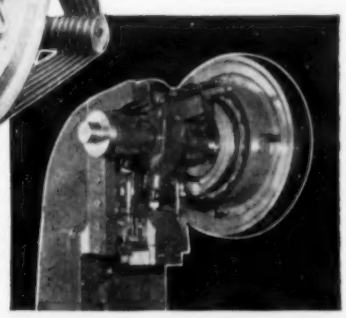
NEW HERMES ENGRAVING MACHINE CORP.
13-19 UNIVERSITY PLACE, NEW YORK 3, N. Y.

FSPA — FAWICK STANDARDIZED PRESS APPLICATION

FOR PUNCH PRESS MODERNIZATION AND IMPROVED PRODUCTION



The compact, rugged, and simple-to-install FAWICK STANDARDIZED PRESS APPLICATION.



The FAWICK STANDARDIZED PRESS APPLICATION on a modern OBI Press.

The FAWICK STANDARDIZED PRESS APPLICATION, designed for OBI and Straight Side presses, provides advantages to Press Manufacturers and Press Operators alike.

The FSPA unit enables manufacturers to deliver their presses equipped with FAWICK Clutches and Brakes—insuring peak press efficiency and continuous "new clutch" performance through an exceptionally long operating life.

Press Operators can convert existing presses to safer, faster, and more accurate production with the FAWICK STANDARDIZED PRESS APPLICATION—providing low cost modernization for punch presses now equipped with clutches of older, less efficient design.

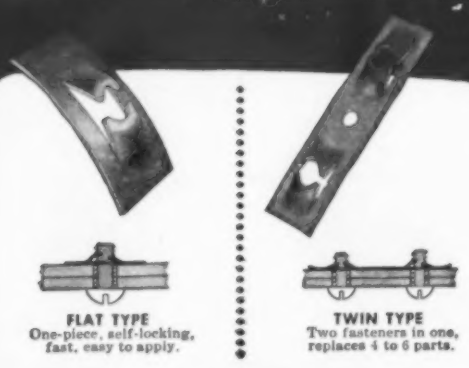
For complete information call or write the Home Office, 9919 Clinton Road, Cleveland 11, Ohio.

FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 CLINTON ROAD • CLEVELAND 11, OHIO

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

▲ For more details circle **NED-643 E5** on enclosed inquiry slip ▲

SAVE IMPORTANT ASSEMBLY DOLLARS
with Tinnerman Speed Nuts®



Any product can be assembled faster, easier, better with Tinnerman SPEED NUT brand fasteners. Here's why. SPEED NUTS are one-piece, self-locking spring steel fasteners. They eliminate lock washers, spanner washers, reduce parts handling and provide lightning-fast, vibration-proof attachments. Over 8,000 different shapes and sizes are available to help you cut assembly costs. Write for free descriptive literature.

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

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JUST WON'T RETIRE

Not unusual . . . just a typical TRANSPORTER performance!
The TRANSPORTER above has worked *10 years*, 8 full hours a day, for a nationally known food company. What makes this company happy, is that the Transporter was written off in 7 years. **It now costs them about 11¢ a day battery charging cost.*
This is typical of the efficiency and economy of all Automatic electric-driven equipment.
Why not let the Automatic representative show you that in handling your product, *nothing does it like an Automatic.*

Exclusive "Earn-Its-Own-Way" Plan makes it easy to lease an Automatic for as little as $1.53 a day, or to purchase your truck with a modest amount down and liberal deferred-payments!

FREE "Cost Cutter" Booklet shows how to chart and analyze your own material handling operations. Write Today!

Automatic
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS
61 W. 87th St., Dept. E-5, Chicago 20, Ill.

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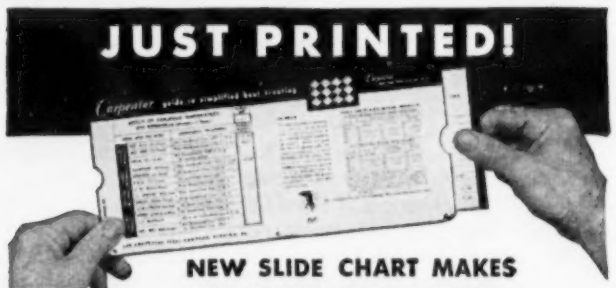
JUST PRINTED!



NEW SLIDE CHART MAKES HEAT TREATING EASIER

Enables you to find at a glance this heat treating information on Carpenter Matched Tool and Die Steels:

- Forging heat
- Normalizing heat
- Annealing treatment
- Hardening treatment
- Drawing ranges
- Effect of drawing temperature on hardness

Gives new, valuable data on speed of heating with 2 vital rules for better results, tips on quenching in water, brine, oil and air, estimating oxidizing atmospheres, heating time, etc. A "must" to help every toolmaker and heat treater get better results, today. Return coupon now for free, easy-to-use slide chart.

THE CARPENTER STEEL COMPANY
118 W. Bern Street • Reading, Pa.
Please rush to me at no obligation, new Carpenter Guide to *Simplified* Tool Steel Heat Treating.
NAME ..... TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....
(PLEASE PRINT)

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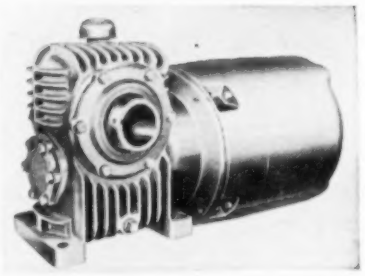
CONTOUR PROJECTOR
economical and easily operated

Bright, halo-free images are produced by the No. 14 optical comparator, an easily operated instrument for accurate measurement of difficult dimensions. Measurements are taken by direct readings from its indicators. Optical arrangement permits use in the bright light of a shop. Large work capacity unit sells for $985. Made by **Covel Mfg. Co.**, Dept. C-1, Benton Harbor, Mich.

▲ For more details circle NED-647 E5 on enclosed inquiry slip ▲

SPEED REDUCERS
offered with or without motor in reduction ratios to 60:1



Models with standard extended shaft and those with worm over, under or vertical are available in line of double - enveloping worm gear speed reducers. Units can be ordered with or without motors as the motor bell housing adapter will accommodate standard NEMA C-type flanged motors. Reducer is coupled to the shaft to be driven, or on the shaft if a shaft-mounted model is specified.

Large tapered roller bearings on the output shaft and a heavy ribbed housing permit "hanging" unsupported loads on the reducer in many applications. All motorized models can be wall, ceiling or floor mounted in any position. Present line includes 2, 2½ and 3-in. center distance units. Reduction ratios range from 5:1 to 60:1 and load capacities from fractional to 9 hp. Made by **Michigan Tool Co.**, Cone-Drive Gears Div., 7204 E. McNichols Rd., Detroit 12, Mich.

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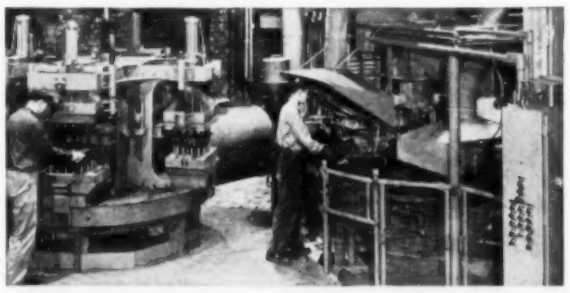
SHELL MOLDING SYSTEM
two men can produce up to 240 molds per hour

All process equipment from sand preparation to handling of finished castings is provided in fully integrated shell molding system. Usable in both ferrous



and nonferrous foundries, system is particularly adaptable for costly alloys where amount of metal must be carefully controlled. Two men operating shell molding and closing machines can produce up to 240 molds per hour.

Shells are prepared on four-station shell molder shown at right. They begin with investment of mix on heated metal pattern and pass successively through curing and shell removal stations. A shell can be made every 15 seconds. Maximum pattern size is 20 x 30 in. Shells are removed from molder, cores are set and drag and cope halves of shell are brought together and bonded on closing machine shown at left. Shells are then placed on trolley conveyor for pouring. Castings are smooth, clean and accurate.

Casting quality is maintained by operators through simple adjustment of controls. System can be laid out compactly and fitted into limited space. Its flexibility allows economic arrangement of sand preparation equipment, molding and closing machines, storage, pouring and shakeout conveyors. All operations are pushbutton controlled. Complete system is offered by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

▲ For more details circle NED-649 E5 on enclosed inquiry slip ▲

FREE FOLDER ON SOAP EQUIPMENT

This handy illustrated folder describes the complete line of individual liquid soap dispensers and the "gravity feed" multivalve distribution system offered by West Disinfecting Company. Also described are several types of individual push-valve dispensers, tilting dispensers, the money-saving Westroll paper-towel dispensers, and a list of other related washroom accessories available from any of West's 57 U. S. and Canadian branch offices.

Originally designed as a folder from which architects could write actual specifications, this folder is all facts and no "sales talk." Printed on heavy manila stock and tabbed like a file folder, it is a convenient place to file all your washroom equipment data. Write West Disinfecting Company, Dept. 16, 42-16 West St., Long Island City 1, N.Y.
Advt.

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A REVOLUTIONARY DEVELOPMENT
VIBRA-FREE*
CARBIDE TIPPED
MEYCO SAWS

You will be interested in this radically new development IF your carbide tipped saws sound like a police siren; IF they develop a "snaky" cut after short usage; IF they dull fast because carbide tips become chipped.

MEYCO VIBRA-FREE* saws embody a new principle in saw design, a new control over vibration by the use of sound absorbing dampers, which eliminate excessive vibration, excessive noise . . . produce smoother cuts, longer life for carbide tips. You get MORE cuts between sharpenings and operators LIKE to use Vibra-Free* blades. Investigate this revolutionary development TODAY. Write for Catalog No. 29.

*T. M. Reg. U. S. Pat. Off.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

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Can Veelos V-Belts
CUT VIBRATION
20% to 90% in your machines?

Machine vibration is usually caused by one or more of these five factors: bearings; motor; clutch; sheaves; v-belts. Frequently, v-belts alone are the major cause of vibration.

Actual performance on many different types of machine tools has proved that Veelos v-belts can reduce vibration 20% to 90%.

Here's why this is so . . .

Every Veelos belt is *perfectly balanced* throughout its entire length. Every Veelos link and stud is *absolutely uniform.* The *smooth, machine cut sides* and the *laminated construction* of the belt assure full, vibrationless power delivery.

These facts can be readily demonstrated with an electronic analyser. This analyser measures amplitude of vibration to as low as 2-millionths of an inch. A few minutes is all that is required to show you that Veelos runs smoother and creates less vibration than regular v-belts.

Drop us a line for a demonstration with the electronic analyser.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.
Adjustable to Any Length • Adaptable to Any Drive
Veelos is known as Veelink outside the United States

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Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch grams ...inch ounces ...inch pounds ...foot pounds

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO. ADDISON QUALITY ILLINOIS

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exclusive

REULAND

"Xpandable" design

typical adaptations from this **BASIC DESIGN**

combines motors brakes • fluid couplings gear-reducers into tailor-made single-unit **POWER PACKAGES!**

Motor with Reuland "Through Shaft" magnetic brake

Motor with fluid coupling and brake on output shaft

Motor with fluid coupling, output shaft brake and helical gear reducer (second brake may also be added)

GREATER COMPACTNESS... *one service responsibility!*

Instead of buying and aligning several separate units, install Reuland *tailor-made, single-unit Power Packages.* You save space and weight, reduce prices up to 25% – simplify installation—improve in-the-field performance.

Literally dozens of combinations are available to fit every powering job. All economical, *standard assemblies* using the basic Reuland "XPANDABLE" motor design.

If your equipment utilizes a motor, brake, fluid coupling, gear reducer (or any combination) why not find out first-hand what a Reuland Power Package can do for you. Give us the details and we'll even submit a "tailor-made" test unit on approval.

OVER 800 "SPECIAL" ELECTRIC MOTOR DESIGNS...

Still further versatility is provided by the Reuland "Library of Specials." Over 800 motors with special electrical and mechanical characteristics... 800 ways you can save development work, get in production faster!

Write today, outlining your particular power problem. No obligation, of course.

REULAND ELECTRIC COMPANY

Distributors in all principal cities

WESTERN DIVISION: Alhambra, California • EASTERN DIVISION: Howell, Michigan

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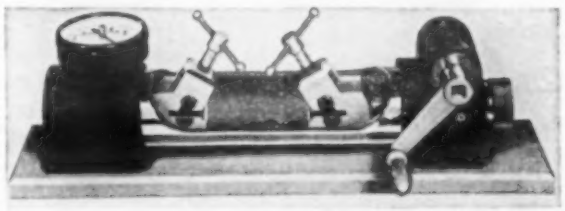
PORTABLE TENSILE TESTER
for strip, wire, welds and bars

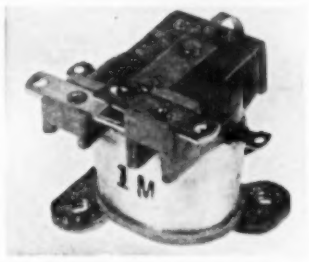
Completely self-contained, this portable tensile testing machine can be used to check strength of wire, strip, bolts, screws, spot welds or any other materials



within its 4000-lb capacity. Only a moderate amount of effort is required to apply the maximum load with the hand crank. Release knob allows the specimen jaws to be adjusted quickly. Results are read directly from integral load gage. Made by **Detroit Testing Machine Co.,** 9394 Grinnell Ave., Detroit 13, Mich.

▲ For more details circle **NED-655 E5** on enclosed inquiry slip ▲

MINIATURE RELAY
1 amp maximum contact load



Simple low-cost type 11F single pole-double throw relay is developed for use in such devices as automatic headlight dimmers, radiosondes and radio controlled toys. Tentative specifications are: operation on 50 mw (24 ma in 9000-ohm coil); 1 amp maximum contact load; up to 9000-ohm coil resistance; and weight of 1 oz. Relay measures 1 5/32 x 1 5/16 x 1 in. Made by **Sigma Instruments, Inc.,** 72 Pearl St., South Braintree, Boston 85, Mass.

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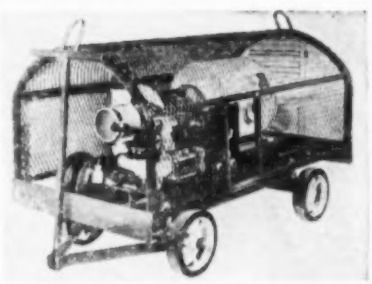
MOLD DRYER
burns any commercial gas



Automatic in operation and requiring no attendant, this mold dryer is a portable unit requiring only 3 x 6 ft of floor area. It can be placed in operation in less than 5 minutes for drying flask, floor or large pit molds. Any drying temperature, any time program or drying depth can be set by turning a knob. Mold dryer burns any commercial gas and operates without vents or special outlets. Made by **Milwaukee Shipbuilding Corp.,** Dept. A, 3718 W. Lancaster Ave., Milwaukee 9, Wis.

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where lack of space is the problem

Try this for size

For guided missiles, airborne equipment, portable and mobile ground equipment

Miniature Ceramic Switch... Series M

Single pole style has 18 shorting type contact positions. 2 or 3 pole types may also be obtained. Additional decks may be added. Flash-over voltage at 60 cycles is 1000 volts peak . . . current carrying capacity is 2 amperes.

- ✱ Coin silver contacts, rotors, slip rings
- ✱ Silicone impregnated ceramic parts
- ✱ Sturdy solder terminals

Write today for further information

THE DAVEN CO.

199 Central Avenue, Newark 4, N. J.

WORLD'S LARGEST MANUFACTURER OF ATTENUATORS

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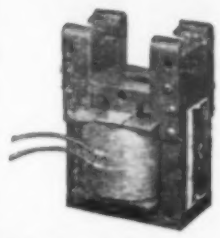
SOLENOIDS

G-211 solenoid, 10 lbs. at 85% voltage, 1½" stroke.



NA-726 solenoid; 16 lbs. at 1" stroke, 100% voltage.

G-200 line of solenoids, replacement for General Electric solenoids: G-206 to G-213 both inclusive, push and pull.

NA-700 line of solenoids, replacement for National Acme solenoids, size for size, for all modifications.

The solenoids of both the above replacement lines are all thoroughbred Trombetta solenoids. All dimensions of interest to the user are the same as the respective solenoids they replace. The pull and pull characteristics are identical. In either case, we are in a position to furnish replacement units for any and all modifications. They are available for all voltages and frequencies, including direct current.

See our catalogs in Sweet's Catalog Service. Ask for more information.

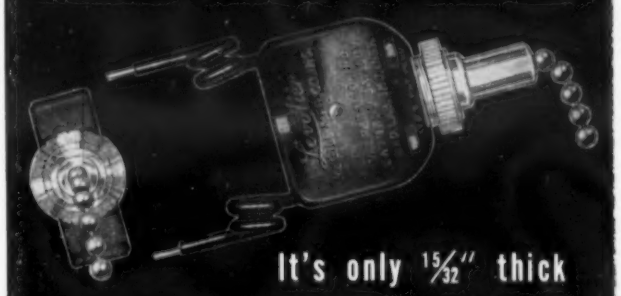
TROMBETTA SOLENOID CORP.

329 N. MILWAUKEE STREET • MILWAUKEE 2, WISCONSIN

▲ For more details circle **NED-659 E5** on enclosed inquiry slip ▲

Specify the *Levolier*® No. 71

WHERE SPACE IS LIMITED



It's only 15/32" thick

Here's just the switch you need for your streamlined lighting canopies and fixtures, and FHP motor housings where switch space is limited. Only 15/32" thick, Levolier No. 71 fits in the smallest spaces. It carries Underwriters' "T" rating on the famous Levolier mechanism that assures dependable, trouble-free switch performance. Furnished with durable molded phenolic case, patented lever control, pull chain and 6" wire leads.

Send for McGILL Catalog No. 49-A

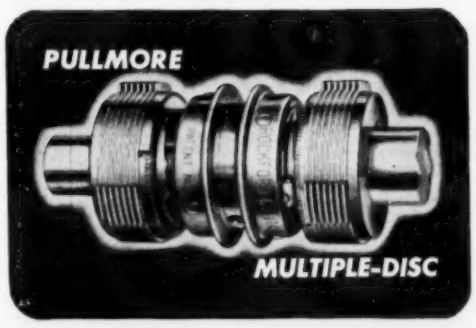
50th Anniversary

YOU CAN DEPEND ON McGILL QUALITY

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

▲ For more details circle **NED-660 E5** on enclosed inquiry slip ▲

ROCKFORD



DOUBLE OR SINGLE TYPE APPLICATIONS

COMPACT DESIGN · HIGH TORQUE · HIGH-RATIO LEVERS · POSITIVE NEUTRAL · PRECISION BUILT · LONG WEAR LIFE · EASY ADJUSTMENT

• These compact, powerful, multiple-disc clutches are helping product engineers to reduce size and weight of the vital link between the driving and driven units of machine tools, lift trucks, overhead cranes and a wide variety of other production equipment. They readily fit into product designs, accommodating great torque capacity within small size. Precision grinding insures perfect fit on the clutch shaft. Symmetrical contours avoid drag that is caused by centrifugal force.

Send for This Handy Bulletin

Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

ROCKFORD CLUTCH DIVISION BORG-WARNER

▲ 312 Catherine Street, Rockford, Illinois, U.S.A. ▲

CLUTCHES

▲ For more details circle **NED-661 E5** on enclosed inquiry slip ▲

BIN Stuck Lately?

No matter what your materials handling problem, there's a size and type CLEVELAND vibrator — air or electric — to fit your need.

TYPE F TYPE VG TYPE SA

Write us today for more data on the subject.

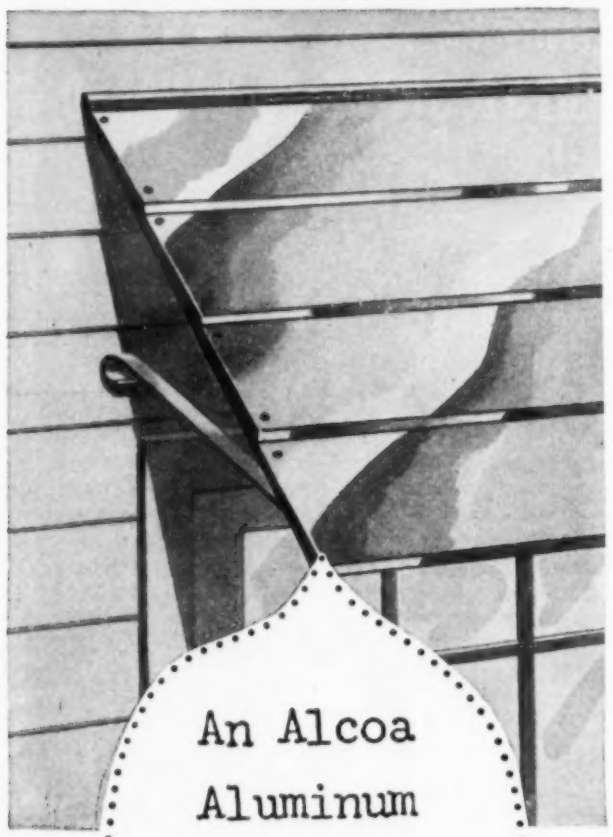
Bin Stuck Lately?

THE CLEVELAND VIBRATOR COMPANY

The Cleveland Vibrator Company • 2744 Clinton Ave. • Cleveland 13, Ohio

The Cleveland Vibrator Company • 2744 Clinton Ave. • Cleveland 13, Ohio

For more details circle NED-662 E5 on enclosed inquiry slip



An Alcoa Aluminum Fastener should be used here!

It's an aluminum awning assembly, worth the lasting strength of Alcoa® Aluminum Fasteners. You avoid galvanic and atmospheric corrosion. You get perfect color match; you get the very highest quality product. Your local Alcoa distributor has a complete stock.

P. S. In this awning assembly, we suggest an aluminum sheet metal screw from Alcoa's complete line of aluminum fasteners.

ALUMINUM COMPANY OF AMERICA
2245-E Alcoa Building, Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of your aluminum fasteners.

Name _____
Title _____
Company _____
Address _____

Always Fasten Aluminum with Alcoa Aluminum Fasteners

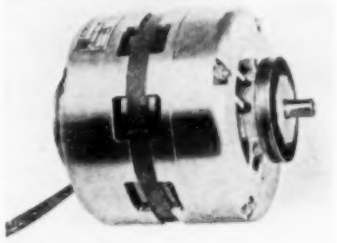
For more details circle NED-663 E5 on enclosed inquiry slip

ADJUSTABLE STOOL
for sitting, standing or leaning

Tools are not required to change position of the Adjustrite sit-stand - lean platform stool from low enough to sit on to a high leaning support. Designed to offer the employee a variety of working positions on the job, the stool is easily adjusted to suit individual needs. Cushioned seat is adjustable to three angles for leaning and the integral platform is also adjustable. Made by **Ajusto Equipment Co.**, Dept. D, 2144 Madison Ave., Toledo 2, O.

For more details circle NED-664 E5 on enclosed inquiry slip

INDUCTION MOTOR
rated 1/8 to 1/100-hp



Business and dictating machines, facsimile equipment, tape recorders and other commercial and military equipment are applications for the model D7302 induction motor, rated 1/8 to 1/100-hp. It has a die cast zinc housing for perfect bearing alignment and air gap concentricity. Motor is available in 2, 4, 6, 8 and 12-pole versions, single and dual speed combinations, in standard induction and synchronous types. Design features include low wow, flutter and external field; balanced magnetic circuit; ball or sleeve bearings; and very low temperature rise. Made by **Howard Industries, Inc.**, 1217 State St., Racine, Wis.

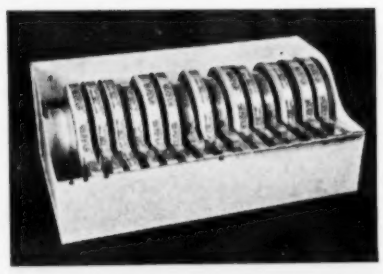
For more details circle NED-665 E5 on enclosed inquiry slip

LIGHTING FIXTURES
explosionproof and cool-operating

An auxiliary reflector of anodized aluminum incorporated in the series H explosionproof lighting fixture assures efficient distribution of light. Strong body construction confines any explosions. Notched adapter design aids air circulation and permits cool operation. Easily relamped fixtures are CSA approved and listed by Underwriters' Laboratories for Class 1, Group C and D locations. Pendant, ceiling and bracket styles are available in 100, 150, 200-300 w (medium base) and 300-500 w (mogul base) sizes with standard dome, shallow or deep bowl or angle reflectors. Made by **Killark Electric Mfg. Co.**, 3944 Easton Ave., St. Louis 13, Mo.

For more details circle NED-666 E5 on enclosed inquiry slip

MULTIPLE TAPE DISPENSER
holds number of rolls as needed



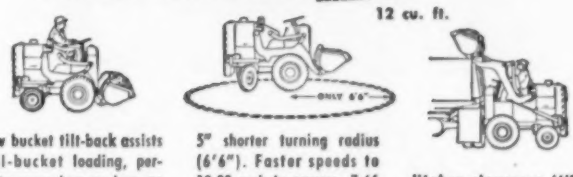
Up to 19 or more rolls of pressure-sensitive tape for circuit tracing, code marking, parts identification, prepricing or trade marking can be held on this Multiple tape dispenser. It is also handy for plants using various widths of masking and special tapes where it is desirable to have them on one dispenser. Unit measures 16 x 8½ x 6 in. and has mandrel capacity of 15½ in. Standard stationary mandrel has 3-in. diameter, but can be supplied in 1 and 1½-in. diameters. Dispenser is finished in white enamel and is supplied with 12 core separators ⅜-in. wide to use between rolls when necessary. It has four rubber suction cups on bottom as well as necessary holes for wall or table mounting. Made by **Ruby Products Co.**, Dept. TD-1, 827 E. Locust St., Milwaukee 12, Wis.

For more details circle NED-667 E5 on enclosed inquiry slip

Cuts handling costs in Darling foundry

Replacing other loaders of less advanced design, Auto-Scoops handle more materials, with less effort, reports Darling Valve & Mfg. Co., Williamsport, Pa. They're worked 18 hrs. a day on all kinds of sand handling, also bagged materials, drums, flasks, etc. Jaeger Auto-Scoops move bigger loads, turn shorter, carry faster, can dump higher and farther than comparable 12 cu. ft. loaders. Many other time-saving features. Write for Catalog L12-4.

JAEGER LOAD-PLUS auto-scoop 12 cu. ft.



Low bucket tilt-back assists full-bucket loading, permits carrying as low as 4½" from ground.

5" shorter turning radius (6'6"). Faster speeds to 13.88 mph in reverse, 7.66 forward.

Higher clearance (6'8"), more reach (2'7").

1 cu. yd. Load-Plus available for bigger work.

THE JAEGER MACHINE CO., 615 Dublin Ave., Columbus, 16, Ohio

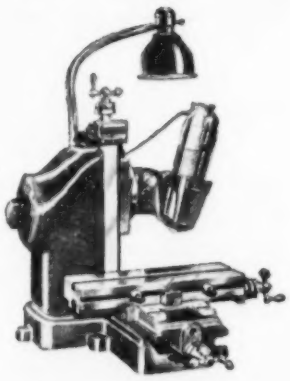
For more details circle NED-668 E5 on enclosed inquiry slip

Precise HIGH R.P.M. MILLING MACHINE

UP TO 45,000 R.P.M. AND ½ H.P.

FOR LOW COST SMALL PARTS MILLING

The first . . . the ONLY Universal Milling Machine with the speeds and sensitivity needed for precision small parts milling with tungsten carbide and other midget mills. Parts for watches, radio, TV, automobiles, aircraft—virtually any small part made of steel, brass, aluminum or plastics can be milled in production in less time to tolerances as close as .0001". PRECISE Heavy Duty Power Quills ride on four micro-precision bearings with sealed-in lubricant. Built-in Control provides speed settings between 15,000 and 45,000 R.P.M. Complete line of accessories and cutting tools is available for unlimited versatility.



CONDENSED SPECIFICATIONS
Table Working Surface, 4" x 12"
Table Travel, 5"
Transverse Travel, 3"
Rise and Fall of Spindle, 3½"

Call Your Industrial Distributor or Write for Catalog.

PRECISE PRODUCTS CORP., 1346 Clark St., Racine, Wis.

For more details circle NED-669 E5 on enclosed inquiry slip

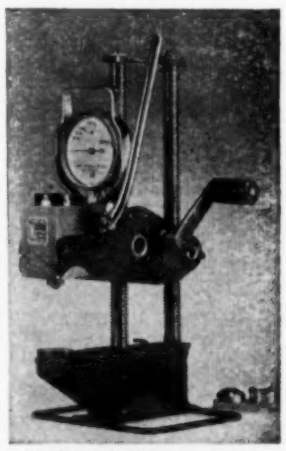
THE **KING PORTABLE** *Brinell* **HARDNESS TESTER**

Offers You More Outstanding Advantages Than Any Other Hardness Tester

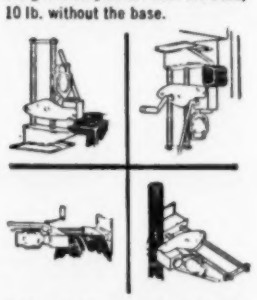
The King PORTABLE Brinell Hardness Tester is an important member to add to your production team because it saves handling and set up time and permits fast, accurate readings. In addition, this versatile unit:

1. is guaranteed to make Brinell tests of the greatest accuracy
2. can be taken to the work or used as a bench tester
3. puts a load of 3000 kg. on a 10 mm ball—other loads as required
4. can test materials in any position almost anywhere — even small cramped spaces
5. has a removable test head to test parts of any size
6. eliminates test bars — there's only one impression to read
7. is especially adapted for testing immovable parts and parts in assembled machines

Ask for the folder illustrating and describing other advantages of this widely used precision tester.



Weight is only 26 lb. with the base, 10 lb. without the base.



The King Portable can be used in any position—even upside down.

Andrew KING

BOX 606T, ARDMORE, PA.

For more details circle NED-670 E5 on enclosed inquiry slip

FAR-INFRARED HEAT

that's easily controlled, infinitely variable!

CHROMALOX *Electric* RADIANT HEATERS

Your Low-Cost Answer to Production Line Heat!

Production line heating tunnels and banks can be easily made right on the job with versatile Chromalox Electric Heaters for drying, baking, dehydrating, curing and other applications. Quickly and easily installed units allow you to "dial" the exact temperatures you require every time—all the time! All-metal construction insures against damage from shock, hard knocks, water, etc., and eliminates contamination hazards.

WRITE FOR BULLETIN CS-604

It gives details on Chromalox Electric Radiant Heaters and shows how they reduce costs and increase production in your plant.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on pg. 4

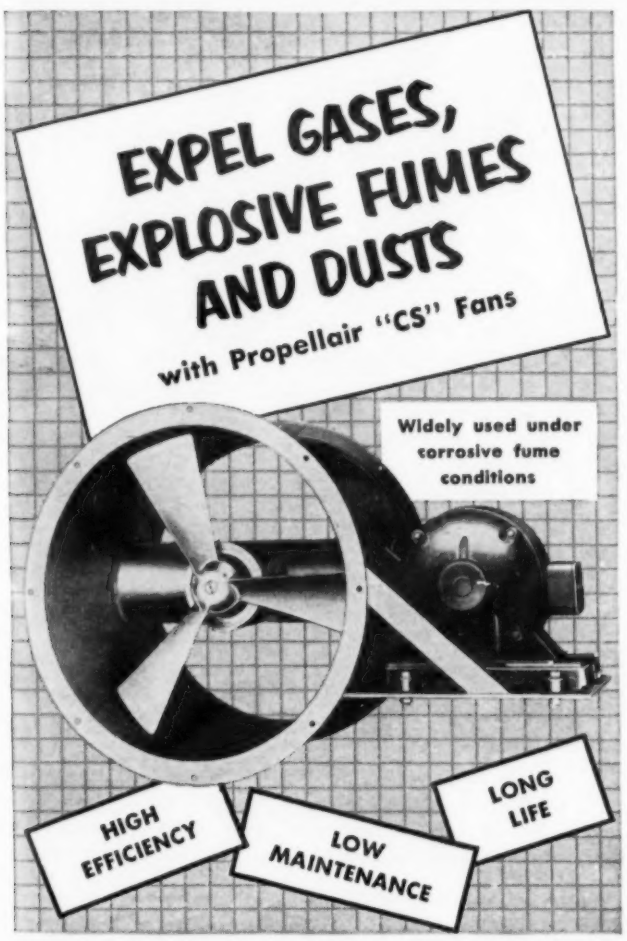
CHROMALOX A-4413

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle **NED-671 E5** on enclosed inquiry slip ▲

EXPEL GASES, EXPLOSIVE FUMES AND DUSTS

with Propellair "CS" Fans



■ **Propellair** "CS" Fans are rugged, heavy-duty units for duct installation. The cast aluminum alloy airfoil propeller is housed in a welded heavy-gauge steel duct section and belt guard with internal bearing assembly.

Robbins & Myers *All-Weather Motor* located outside airstream. Sizes 20" to 60", with certified air deliveries of 3750 to 85,000 c.f.m. Available with corrosion and abrasion-resisting finishes and with ventilated bearings suitable for operation in high temperatures.

Simplified Installation

Propellair "CS" Fans are built to fit standard duct sizes without the need of elbows. The fan drum has front and rear flanges drilled for easy mounting into duct system.

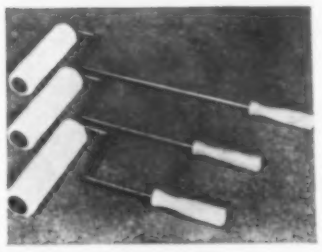
Our engineers are at your service for fan selection and application advice. Write for Bulletin 650N.

R&M PROPELLAIR®
DIVISION OF ROBBINS & MYERS · INC
SPRINGFIELD · OHIO

Man Cooler · Direct Drive · Sky-Blast · Vaneaxial · Extended Shaft

▲ For more details circle **NED-672 E5** on enclosed inquiry slip ▲

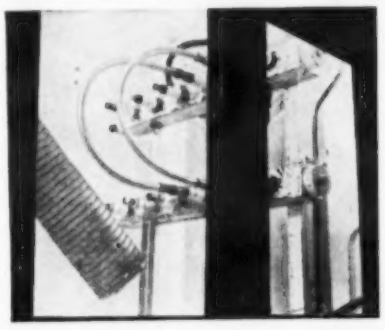
PAINT ROLLERS designed for industrial use



Handle lengths available on these industrial paint rollers are 14, 18 and 24 in. Wire rod used in handle is 5/16-in. diameter with a wood grip. Rollers feature nylon end caps and 9-in. long-nap Lonel or woven wool cover on a phenolic core. End of wood grip will accommodate a 48-in. extension handle for work in high areas and on ceilings. Made by **E Z Paintr Corp.**, 4051 S. Iowa Ave., Milwaukee, Wis.

▲ For more details circle **NED-673 E5** on enclosed inquiry slip ▲

HYDRAULIC HOSE withstands 3000 psi and 400° F



Pressures up to 3000 psi and temperature up to 400° F are successfully withstood by Fluoroflex-T KR700 hose designed for jet aircraft fuel line use. Hose will resist all known synthetic or petroleum - based hydraulic fluids at this temperature and pressure. Sizes now available for field testing are 3/8 and 1/2-in., with 1/4, 5/8 and 3/4-in. sizes to be available soon. Photo shows hydraulic hose assembly being tested at 3000 psi operating and 4500 psi peak pressures at 35 cycles per minute. Fluid and ambient temperature are at 400° F. Made by **Resistoflex Corp.**, Dept. NED, Belleville 9, N. J.

▲ For more details circle **NED-674 E5** on enclosed inquiry slip ▲

DEHUMIDIFIER-FILTER removes contaminants

Model 5 Vi-Speed dehumidifier and filter, designed with a maximum capacity of 5 cfm at 100 psi, removes all contaminants from compressed air systems, including oil and water vapors. The low volume Dehumidi-Filter has a 60 to 150-psi operating range. It is particularly suitable for use with instruments or other low volume pneumatic equipment. Made by **Van Products Co.**, 5766 Old Ridge Rd., Swanville, Erie 7, Pa.

▲ For more details circle **NED-675 E5** on enclosed inquiry slip ▲

for SUPERIOR DESIGN use... Hydro-Line CYLINDERS

SERIES "J" CYLINDERS

For rugged, trouble free SERVICE

- *CARTRIDGE . . . rod-wiper, packing, bushing in one unit.*
- *RUGGED BODY . . . all steel end caps and barrel.*
- *PISTON RINGS . . . step-cut joint, sealing in both directions, long life, minimum leakage.*
- *PRESSURE . . . 2,000 psi heavy-duty . . . 3,000 psi non-shock.*
- *SIMPLICITY . . . no tie-rods . . . no retainer rings.*

Write for Bulletin No. 53

Hydro-Line *Manufacturing Co.*

5601 PIKE ROAD • ROCKFORD, ILLINOIS

▲ For more details circle **NED-676 E5** on enclosed inquiry slip ▲

INDUSTRY'S EXTRA HAND

MAGNETIC HOLDERS AND ACCESSORIES

Fast, easy to use in any position, Erick Magna-Holders and dependable, precision-built accessories increase productivity, accuracy, and safety on 1001 industrial jobs . . . for layout, inspection, maintenance, and production operations. Powerful, lifetime magnetic holders adhere to curved or flat surfaces. Write for complete catalog describing other Magna-Holder styles and variety of labor-saving accessories.

SUPERIOR, LOW-COST DIAL INDICATOR

Meets most exacting requirements. Reads both sides. Unconditionally guaranteed to repeat within one-thousandth! Complete 360° freedom in all directions. Grips firmly to machine surfaces. Complete with holder and swivel adaptor. No. 200BC only **$16.35**

FLOOD LIGHT

Adjusts to any position. Ball socket joint. Takes up to 100 Watt standard bulbs. Includes 6 ft. heavy-duty cord. Complete with magnetic base. No. 675...only **$8.50**

MAGNA-HOLDER ONLY

Powerful Alnico magnetic base creates 50 lb. pull. Precision thumb screw adjustment. No. 200B . . . only **$5.45**

ORDER DIRECT

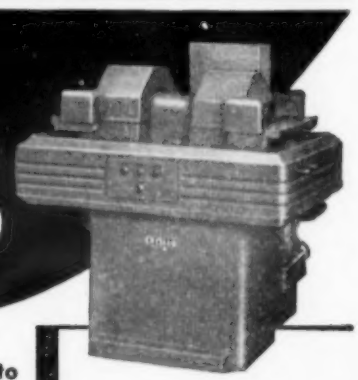
GENERAL SCIENTIFIC EQUIPMENT CO.
GENERAL SAFETY EQUIPMENT
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.

SAFETY EQUIPMENT FOR EVERY HAZARD

OPEN ACCOUNTS INVITED

▲ For more details circle **NED-677 E5** on enclosed inquiry slip ▲

Tool Grinders BY EX-CELL-O



There are models to suit the needs of every shop, large or small. All are double-end models using cup-type wheels; with large tool rest tables, easily adjusted. For data on Ex-Cell-O's complete Tool Grinder line, write to Detroit, or call your local Ex-Cell-O representative.

STYLE 49-A Ex-Cell-O Precision Carbide Tool Grinder. A heavy-duty model. Takes carbide, cast alloy, and high-speed steel tools—medium and large size.

This new grinder has a new coolant system; is easier to clean and stays clean longer. Troughs and coolant return lines are larger and more accessible, and a settling tank has been added.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

55-5 XLO EX-CELL-O for PRECISION

▲ For more details circle **NED-678 E5** on enclosed inquiry slip ▲

HURRY AND

Get this Booklet

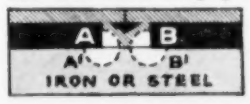
FOR DATA ON 100% EFFECTIVE RUST KILLER

ZRC

94% ZINC RICH COATING STOPS CORROSION ON IRON AND STEEL . . . "COLD GALVANIZING" FORMULA ASSURES LOWEST FINAL COST

ZRC Covers 1200 sq. ft. per 24 lbs. giving ¼ oz. zinc per sq. ft. Easily brushed or sprayed on new or old surfaces, ZRC cuts maintenance costs and extends the life of structural steel work, bridges, corrugated iron roofing, water tanks, railway installations, gas storage tanks, shipbuilding, dock and harbor installations . . . as well as on original equipment.

ZRC "Cold Galvanizing" gives added sales ammunition to the alert OEM.



In presence of water the zinc (A & B) becomes anodic. The iron or steel (A¹ & B¹) becomes cathodic. Corrosion attacks the anode, or zinc layer, forming a film which helps retard further corrosion, while the cathodic iron or steel remains untouched.

The SEALUBE Company

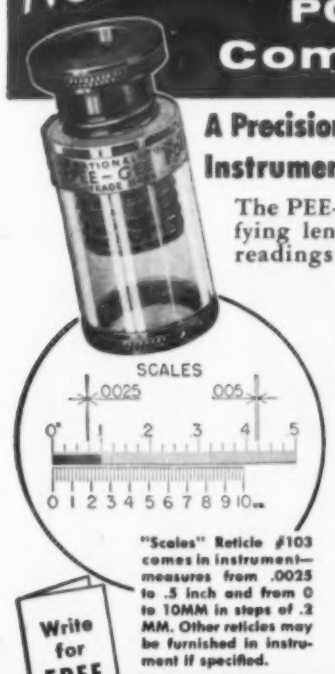
Caulking and Coating Division • Dept. WN, Wakefield, Mass.

STOPS RUST COLD

▶ Some Territories Open

▲ For more details circle **NED-679 E5** on enclosed inquiry slip ▲

New PEE-GEE POCKET Comparator



A Precision Optical Measuring Instrument *for only* $9.75!

The PEE-GEE's powerful magnifying lens makes it easy to get readings of very small dimensions, and its almost unbelievable accuracy results from extreme reduction of large "Master" layouts to tiny transparent patterns called "reticles".

Reticle #103 shown here is furnished with the instrument. 6 other reticles are available in convenient case. (Price $4.25 complete.) These measure radii, angles, threads, thicknesses, diameter of circles, and linear measurements.

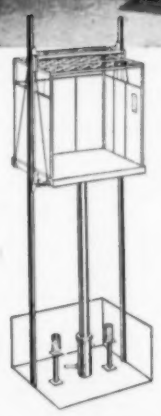
"Scales" Reticle #103 comes in instrument—measures from .0025 to .5 inch and from 0 to 10MM in steps of .2 MM. Other reticles may be furnished in instrument if specified.

Write for FREE descriptive folder

See Your National Tool Co. Representative or Local Jobber

NATIONAL TOOL CO.
11300 Madison Avenue Cleveland 2, Ohio

▲ For more details circle **NED-680 E5** on enclosed inquiry slip ▲



Most practical ELEVATOR

for rises up to 55 feet

Rotary Oildraulic Elevators are designed for low-cost installation and trouble-free economical operation. No penthouse or heavy load-bearing shaftway structure is required —powerful hydraulic jack supports car and load. Rugged car construction withstands shocks and jolts of power truck loading. Automatic floor leveling within ¼" guaranteed, regardless of load size or rate of speed. Car sizes, capacities and controls as required.

Over 100,000 Oildraulic Elevators and Lifts are now in use . . . backed by Rotary's coast-to-coast service organization. Mail the coupon below for new catalogs on Rotary Oildraulic freight or passenger elevators.

MAIL NOW FOR NEW CATALOG

ROTARY LIFT CO.
1017 Kentucky, Memphis 2, Tenn.
Send catalog on ( ) freight ( ) passenger elevators to:

Name_____

Address_____

City_____

State_____

Rotary®

OILDRAULIC® ELEVATORS

▲ For more details circle **NED-681 E5** on enclosed inquiry slip ▲

APPLIANCE CIRCUIT BREAKER reset easily with pushbutton

Designed for incorporation in appliances and other small electric equipment, Mini-Breakers are engineered for single-hole mounting, and terminals accept AMP-Faston or similar connectors. Model MP-252 furnishes permanent pushbutton primary circuit protection for 15, 20 and 30-amp loads, while the model MP-600 is designed for 4 to 30-amp secondary circuits. Manually reset and trip-free units provide positive protection against overloads or short circuits. Service can normally be restored within 10 seconds after harmless overloads or shorts, yet these breakers will not maintain a circuit that has not been cleared. Made by **Mechanical Products, Inc.**, 1824 River St. at Porter, Jackson, Mich.

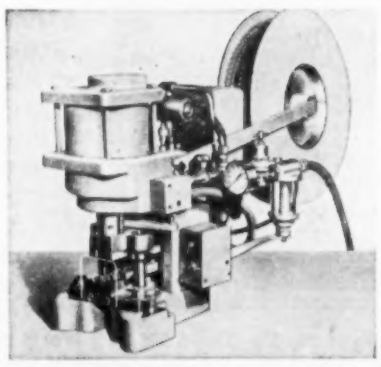
▲ For more details circle **NED-682 E5** on enclosed inquiry slip ▲

ELECTRIC TRUCK ATTACHMENT handles dies up to 6000 lb

Dies up to 6000 lb in weight can be handled by this electric attachment which will fit any standard Moto-Truc lift truck. Four-way entry into attachment allows pushing and pulling of loads from sides as well as from front. Push - pull action is electric, and entire action of die attachment is controlled by remote control pushbuttons. Truck shown is standard Hi-Lift model which features Roller Grip controls and is powered by 18-v battery. Made by **Moto-Truc Co.**, 1961 E. 59th St., Cleveland 3, O.

▲ For more details circle **NED-683 E5** on enclosed inquiry slip ▲

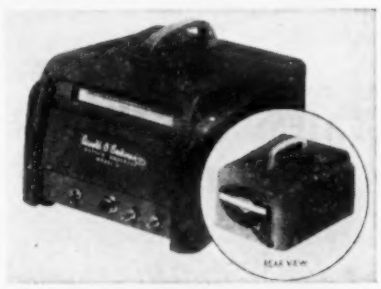
TERMINAL ATTACHING MACHINE automatically applies wire terminals



High speed application of strip terminals to electric wires is performed automatically with this improved cold terminal attaching machine. Terminals are fed, crimped and cut off by simple air pressure operation. Improvements include precision feeding of strip terminals through in-line single-unit feeding mechanism, solenoid trip on air feed and foot treadle control. Made by **Patton-MacGuyer Co.**, 16 Virginia St., Providence, R. I.

▲ For more details circle **NED-684 E5** on enclosed inquiry slip ▲

PORTABLE OXYGEN ANALYZER gives direct physical measurement



Particularly designed for applications requiring a quick, simple, accurate means of measuring oxygen, Model C2P portable oxygen analyzer is convenient to use in field, plant or laboratory. It provides direct physical measurement and can be used for measuring continuously-flowing samples or for fixed-volume samples as small as 3 cc. It can be obtained in practically any range of 5 per cent between 0 and 75 per cent oxygen and in ranges of 15 per cent between 75 and 100 per cent oxygen. Accuracy is within 1 per cent of full scale. Instrument operates on 115-v ac. Announced by **Arnold O. Beckman, Inc.**, Dept. ED, 1020 Mission St., South Pasadena, Calif.

▲ For more details circle **NED-685 E5** on enclosed inquiry slip ▲

Du-Lite FINISHED

The Marlin Firearms Co., "Famous for Fine Guns since 1870", has long depended on Du-Lite black oxide for an attractive finish that will be dimensionally stable throughout the life of the gun.

The Du-Lite process provides intricate precision parts with a durable, rust-resistant black oxide finish. And since Du-Lite penetrates the metal, all crevices and knurls are protected without affecting dimensions or fit.

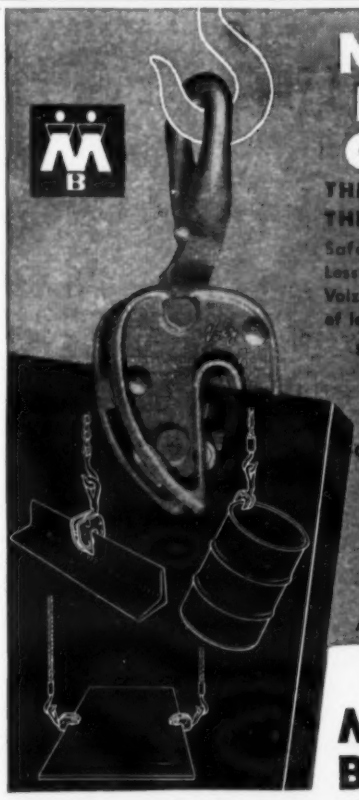
If your target is durable, attractive, economical finishing, you'll want to know more about Du-Lite black oxide.

Whatever your cleaning or finishing problem—**Depend on Du-Lite.**

Write for complete information.

Du-Lite DU-LITE CHEMICAL CORP. MIDDLETOWN CONN.
METAL FINISHING SPECIALISTS

▲ For more details circle **NED-686 E5** on enclosed inquiry slip ▲



MERRILL LIFTING CLAMPS

THE HEAVIER THE LOAD THE TIGHTER THE GRIP!

Safer and Speedier Lifting at Less Cost... have made MERRILL-Volz LIFTING CLAMPS the choice of large Steel Mills everywhere.

SAFER
- Safety factor of 5 to 1.
- Factory tested at double rated capacity.

GREATER SPEED AT LESS COST
- Entirely Drop Forged and Heat Treated.
- Working parts entirely enclosed.
- Pins do not rotate in frame eliminating wear.

Available in Stainless Steel.

Sold by Better Distributors Everywhere

MERRILL BROTHERS

For Interesting Information write
56-13 ARNOLD AVE., MASPETH, N. Y. 3-K-2-R

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Why do the "hardest-to-please" ask first for Anaconda Magnet Wire?

Because Anaconda's thorough quality control system — from copper rod through each manufacturing step — assures uniform wire with good elongation characteristics . . . improves the quality of products and lowers magnet wire winding costs. In addition — many users take advantage of Anaconda engineering assistance in solving special problems. If you are not already an Anaconda magnet wire user, place a trial order with your distributor and learn for yourself why ANACONDA Wire has so many loyal friends. Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y. 55272

Class A: FORMVAR* ENAMEL* NYFORM* NYLON
Class B: VITROTEX* • SILICONE
Class H: SILOTEX*
*Reg. U. S. Pat. Off.

ANACONDA®
MAGNET WIRE

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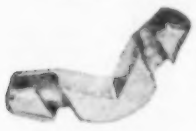
WIRE ROPE FITTINGS

U. S. PAT. NO. 2600417

by NEWCO®

COMBINATION WIRE ROPE CLAMP AND THIMBLE

Develops 85 to 95% of catalog list of wire rope strength.



SLING SADDLE AND PROTECTOR

Protects the body of sling. Strand cutting around 90° edges eliminated.

SLIP-ON THIMBLE

Cuts sling costs. Flattening or pulling together of the eyes under heavy loads is eliminated as is severe wear at the top of the eye.

SLING BRIDLE

Will not slip on unbalanced loads. Eliminates pear-shape link and two splices. Cuts Cost.

Additional Rope Fittings — Safety Hooks — Choker or Traveling Hooks.

For additional detailed information write for catalog or see your nearest distributor.

NEWMAN MANUFACTURING and SALES CO.
BOX 5939 KANSAS CITY 11, MO.

▲ For more details circle **NED-689 E5** on enclosed inquiry slip ▲

amazingly compact gearing

New, Cone-Drive motorized speed reducers provide the most compact drive package available. All the space-saving advantages of double-enveloping worm gearing are combined with motorizing's elimination of pulleys, belts, bearings, extra mountings, etc.

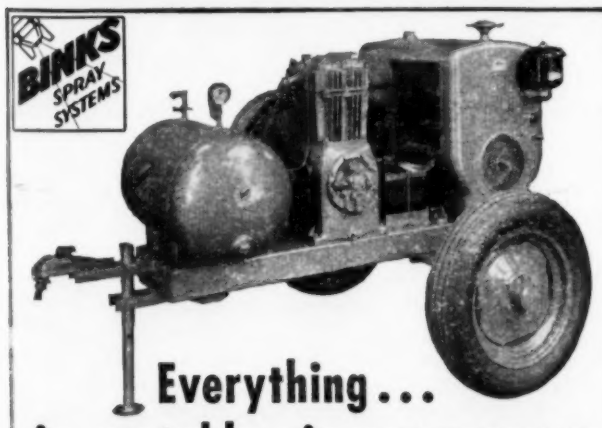
There's no secret behind Cone-Drive gearing's amazing compactness. It's the double-enveloping worm gear design, which means much smaller center distances to carry the load. Gears and housing are much smaller and weight is reduced, too.

Motorized Cone-Drive speed reducers are versatile. You can specify them without motor and utilize your own NEMA C-flange motors if desired. Capacities up to 9 hp in both extended shaft and shaft-mounted models. Ratios are standard from 5:1 to 60:1. Worm over, under or vertical models in stock.

CONE-DRIVE GEARS
Division Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNichols Road • Detroit 12, Michigan

▲ For more details circle **NED-690 E5** on enclosed inquiry slip ▲

BINKS SPRAY SYSTEMS



Everything... in portable air compressors

Binks portable air compressors are designed for medium size spray painting jobs and are equipped with electric motors or gasoline engines. Ideal for the maintenance painter, or for production in shops, factories, etc. Sizes from 3 CFM to 85 CFM.

For further information

Ask your Industrial Distributor for these free fact-filled books—HOW TO SELECT AN AIR COMPRESSOR—CATALOG 810—or write directly to:

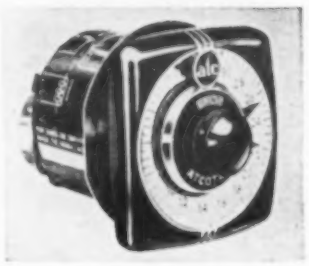
Binks

BINKS MFG. CO.
3122-34 W. Carroll Ave.
Chicago 12, Ill.

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES · SEE YOUR CLASSIFIED DIRECTORY

▲ For more details circle **NED-691 E5** on enclosed inquiry slip ▲

AUTOMATIC RESET TIMER
contacts handle 10-amp loads



Timing and sequencing of electrical load circuits on industrial machinery and process operations are readily controlled with this Atcotrol automatic reset timer. It mounts in 3 3/16-in. round hole and is held in place by tension studs on back-up ring held in position by O-ring retainer. All parts are accessible for inspection without interrupting operation. Interchangeable self-cleaning contacts are rated 10 amp at 115 v ac. Interchangeable dials and motors make possible ten timing ranges from 0-15 seconds with minimum setting of ¼-second to 0-240 minutes with minimum setting of 4 minutes. Made by **Automatic Temperature Control Co.,** 5206 Pulaski Ave., Philadelphia 44, Pa.

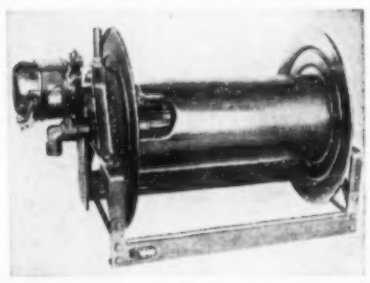
▲ For more details circle **NED-692 E5** on enclosed inquiry slip ▲

LOAD TIE DOWN
absorbs shock and thrust

Fabreeka type snubber to absorb shock and thrust is combined with a heavy duty AFM ratchet-type railroad binder in this tie down designed to position, tighten and hold highway trailers on flat cars. Large hook at right attaches to car side rail or bar, affording flexibility in positioning the tie down. Distributed by **American Forge & Mfg. Co.,** Dept. N, 818 Shore Ave., Pittsburgh 12, Pa.

▲ For more details circle **NED-693 E5** on enclosed inquiry slip ▲

POWERED HOSE REEL
motor mounted on plate near top



Greater flexibility in positioning fire hose reels on apparatus is achieved with this elevated motor hose reel. Motor is solidly mounted on anchor plate near top rather than at base of reel. Thus, reel can be recessed in well of apparatus with motor protruding above well, saving up to one-third the space otherwise needed. Unit features leakproof ball bearing swing joints and sealed push button motor control. Made by **Clifford B. Hannay & Son, Inc.,** Dept. 209, Westerlo, N. Y.

▲ For more details circle **NED-694 E5** on enclosed inquiry slip ▲

PORTABLE MIXERS

. . . offer ECONOMY

Operating expenses dip to a new low when you choose Portable Mixers from the complete Eastern Series. Available from 1/20 to 5 H.P. with a variety of speeds and motor enclosures. Your small initial investment pays rich dividends in economy.

For complete mixer selection information write for Eastern Catalog 510-A

Eastern INDUSTRIES, INC.
REGENT ST., E. NORWALK, CONN.

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ROTO FINISH

it's the finish that counts!

Roto-Finish maintains exact tolerances on precision parts with no significant dimensional changes. It makes possible a wide range of finishes applicable to parts of almost any size or shape; finishes a variety of materials — at big savings in manpower and costs. Without obligation, send sample unfinished parts to us. Include finished part for guide and your specifications. Roto-Finish will finish parts in its laboratory. You get a complete process report. You are guaranteed results and a finish that counts!

WRITE FOR FACT-PACKED ROTO-FINISH CATALOG NOW!

Roto-Finish COMPANY
3702 MILHAM ROAD, KALAMAZOO, MICH.
P. O. Box 988 — Phone 3-5578

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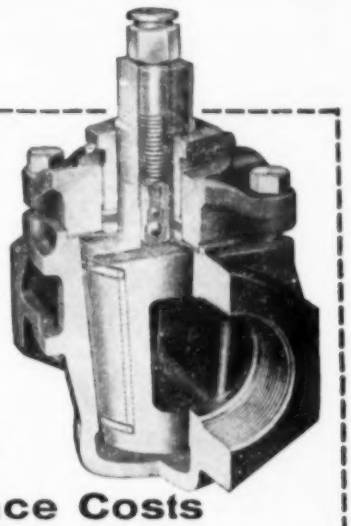
How Rockwell-Nordstrom Valves **Cut** **Maintenance Costs**



Here are three good reasons why Rockwell-Nordstrom valves are used in thousands of process and manufacturing plants to cut valve maintenance costs (first cost, too, is often actually less than ordinary valves):

1. LONGER LIFE . . . LEAKPROOF Rockwell-Nordstrom valves cost less to use because *pressurized lubrication* eliminates metal-to-metal friction . . . the major source of costly valve wear. Pressurized lubricant in the special *Sealdport** grooves also forms a remarkably *leakproof* seal, far more efficient than metal-to-metal seating where a tiny scratch means leakage.

2. RESEATING ELIMINATED Frequent and costly reseating eliminated because the seats (first part to wear out in ordinary valves) are *never* exposed to corrosive or erosive line materials.

3. LESS DOWN TIME Costly down time is slashed because lubrication eliminates trouble before it starts. Stuck, galled or jammed valves that might tie-up production are never a problem—the plug can be hydraulically jacked for *instant* quarter-turn operation. And they can be lubricated, and adjusted under pressure.

Rockwell-Nordstrom, *the original* lubricated plug valves, are available in a complete range of sizes and pressure-temperature ratings in semi-steel, steel and corrosion-resisting metals. For more information, send the coupon today.

Canadian Valve Licensee: Peacock Brothers Limited

*A registered trade mark of Rockwell Manufacturing Company

Rockwell-Nordstrom Valves
LUBRICANT SEALED FOR POSITIVE SHUT-OFF

ROCKWELL MANUFACTURING COMPANY
Pittsburgh 8, Pennsylvania
Dept. 2-E

☐ Please send me Bulletin V-215.
☐ Please send name of nearest Rockwell-Nordstrom industrial distributor.

Name _____ Title _____
Company _____
Street _____
City _____ Zone ____ State _____

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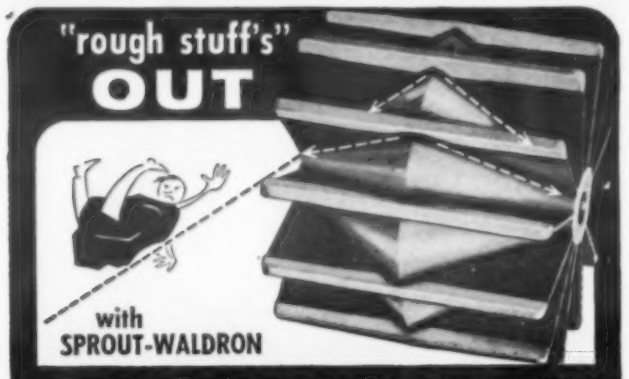

BELT-SAVER PULLEYS

Sharp lumps and abrasive materials are cast out of Belt-Saver Pulleys by the exclusive cone and wing design . . . without lodging between belt and pulley. This protects belts so effectively that belt life is increased 50% to 400%.

For conveying and transmission use, Sprout-Waldron also offers a wide selection of sturdy cast-iron pulleys in many sizes and types.

Write for free booklets!

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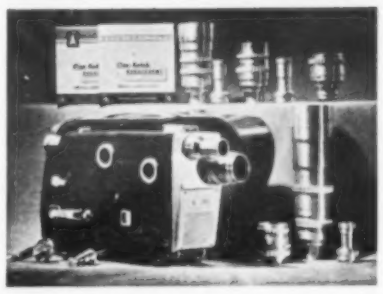
8 LOGAN STREET • MUNCY, PA.
PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS
MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS • BUCKET ELEVATORS
CUTTERS, CRUSHERS, AND FEEDERS • REELS, SEPARATORS, AND ASPIRATORS

For more details circle NED-698 E5 on enclosed inquiry slip

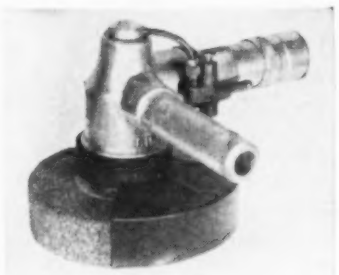
16-MM MOVIE CAMERA for industrial photography



Prestressed spring-power motor that exposes up to 40 ft of film at a single winding is a feature of the Cine-Kodak K-100 16-mm roll-film movie camera. Designed for industrial and business usage, it has a speed range of 16 to 64 frames per second and uses 50 or 100-ft rolls of either single-perforated film for sound recording or standard double-perforated film. Any of a number of Kodak Cine Ektar lenses in focal lengths from 15 mm (wide angle) to 152 mm (six times magnifying telephoto) can be used. Camera is offered with f/1.9 or f/1.4 lens. Auxiliary hand crank makes it possible to backwind in producing multiple exposures. Camera can also be run by an electric motor drive shaft. Various combination lens attachments are available. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-701 E5 on enclosed inquiry slip

GRINDER ANGLE HEAD allows quick change of wheel



Designed for use with WYCO flexible shaft grinders, Quick-Change angle head features thumb-controlled water feed, fully protected copper feed line, adjustable wheel guard and precision ball bearings. Quick change feature allows user to change from coarse to fine grinding wheels easily and rapidly, or to a straight handpiece, as required. Made by **Wyzenbeek & Staff, Inc.**, 218 N. California Ave., Chicago 12, Ill.

For more details circle NED-702 E5 on enclosed inquiry slip

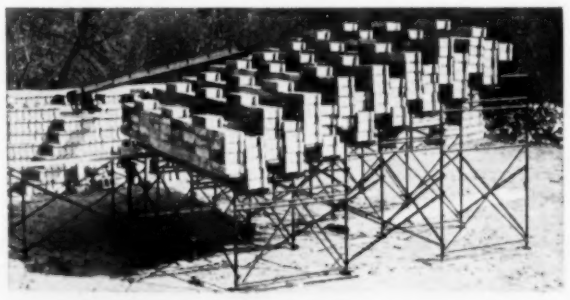
METAL BELT CONVEYOR offered in 12 to 60-in. widths

Armorbelt sectional metal belt conveyor, available with 6-in. pitch belt links, is furnished in 10 standard widths from 12 to 60 in. wide. Conveyor can handle various types of packages through horizontal, inclined and vertical paths. Load is carried on ball bearing rollers and all moving parts except the belt surface are guarded. Belt tracks without attention and is undamaged by water, oil, heat, impact and abrasion. It is usable as a package, floor, multilevel, production line or vertical unit. Standard accessories include side leaves, side tables, cleats, vertical bends, diverters, corner rolls, and gravity roll spurs. Made by **M-H Standard Co.**, 513 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-703 E5 on enclosed inquiry slip

TUBULAR STEEL BLEACHER quickly erected and disassembled

Fast erection and disassembly of model 2600 tubular steel bleacher is made possible by Speedlock which ties frames and sway braces into an integral unit.



Interlocking is by means of built-in coupling pins, eliminating nuts and bolts. Seat and foot boards are securely fastened to structure without bolting. Bleacher will support loads over 600 lb per seat without approaching yield point. Made by **Sico Grandstands, Inc.**, Dept. A, 3565 Wooddale Ave., Minneapolis 16, Minn.

For more details circle NED-704 E5 on enclosed inquiry slip

Special cold headed products

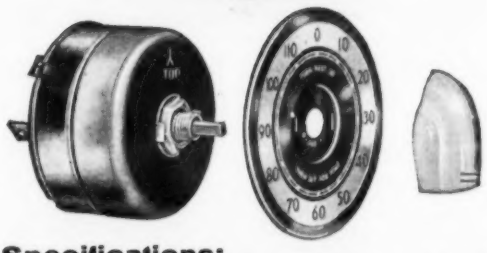
. . . nails • rivets • screws . . . made to order

. . . and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

JOHN HASSALL INC.
P.O. Box 2178 Westbury • Long Island, New York

For more details circle NED-705 E5 on enclosed inquiry slip

MARK-TIME "9200" Bell Signal Time Switch



Specifications:
U/L approved. 28 amp. ½ hp., 120-240 v. AC only. Diameter, 2 19/32"; depth, 2 5/64"; center stud mounting.

Combines LOW COST VERSATILITY SALES APPEAL

The Mark-Time 9200 Bell Signal time switch has been redesigned to **increase** its already wide acceptance. This switch has proven itself on clothes dryers, ranges, broiler-rotisseries, battery chargers, washing machines, and in many other applications where an automatic time switch and bell signal are needed. It is the most versatile bell signal time switch on the market . . . available in various combinations of circuit arrangements and dial styling, and ideal for all heating elements with high voltage requirements.

The "9200" is a streamlined, durable, low cost unit which normally breaks two circuits simultaneously (DPST), and at the same time sounds a clear, resonant bell signal. It is designed for easy, economical installation on all ranges and other appliances, and is engineered for rugged dependability, accuracy and high quality.

Write today for full details and prices.

FIRST where quality counts
M. H. RHODES, INC.
Hartford 6, Connecticut

Manufactured and Sold in Canada by
Sperry Gyroscope Ottawa, Ltd., 3 Hamilton St., Ottawa, Ontario, Canada

For more details circle NED-706 E5 on enclosed inquiry slip

If Additional Steam Is Your Need . . .

VAPOR MODULĀTIC VERTICAL STEAM GENERATOR

IS YOUR SIMPLEST ANSWER!

160 h.p. takes no more space than a watchman's cot. Just set for the volume and pressure you want—Modulātic does the rest. Clean. Quiet. Efficient. Passes complete through plant-type doorways. Needs no special foundation, no separate enclosure, no expensive stack. Seven sizes: 18 to 160 h.p. Pressures: 5 to 285 psi., and more. Oil, gas, or combination burner. Over 10,000 in use. The same dependable steam supply Diesel Streamliners use now can be yours for heating, power, or processing.

Ask for BULLETIN 586

VAPOR HEATING CORPORATION
80 E. Jackson Blvd., Chicago 4, Ill.
In Canada: Vapor Car Heating Co. of Canada, Ltd., 65 Dalhousie St., Montreal 3

For more details circle NED-699 E5 on enclosed inquiry slip

Quick SAFE Complete

Washing and Cleaning of Production Parts . . . with PROTECTOSEAL *Air-Matic* PARTS WASHER

Set beside machine or convenient to any other working area. Load wash basket as parts come from machine or in bulk. AIR-MATIC washes unattended while work continues.

Basket moves *through* solvent with minimum turbulence and evaporation. *Safe:* renewable fusible link closes cover automatically to smother fire.

Protectoseal designs and builds all types of approved fire preventive equipment for the storage, transfer and plant use of all flammable liquids.

Fill in coupon and attach to company letterhead for complete information.

In Canada: Safety Supply Co., Toronto.

The Protectoseal Company, 1964 So. Western Avenue, Chicago 8, Illinois
☐ Send Air-Matic Parts Washer Catalog Sheet
☐ Flammable Equipment Guide Chart and Price List describing more than 30 approved Fire Prevention Devices for Plant Use
Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-700 E5 on enclosed inquiry slip

FOR COMPLETE PROTECTION

FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S FISH BRAND *NEOPRENE

These sturdy, durable, 100% DuPont **NEOPRENE** garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER garment especially adaptable for every type of industrial activity. We manufacture protective coats, suits, hats and aprons and will be glad upon request to suggest the type of TOWER garment which will best meet your individual requirements.

*A chemical rubber product of the DuPont Company

For folder of styles and detailed information write Department SF.

NEOPRENE RUBBER

TOWER'S FISH BRAND — A. J. TOWER CO. — TOWER'S ARROW BRAND

24 SIMMONS ST. BOSTON, MASS.

For more details circle NED-707 E5 on enclosed inquiry slip

NOW...a NEW LINE of Oilgear VARIABLE DELIVERY PUMPS

for applications up to 3 h.p.

Oilgear announces a new line of extremely versatile one-and two-way variable delivery pumps for straight-line and rotary applications. These are heavy duty "package" units that simplify linear and rotary drive systems . . . cut engineering, installation and maintenance costs . . . set new standards of dependability and performance and increase user acceptance. A type "A" pump, a cylinder and two pipe lines or a type "A" pump, Oilgear motor and three pipe lines complete the system. No auxiliary equipment is required. Seven standard, integral controls are available.

Write for free copy of new 8 page Bulletin 47010 that illustrates many representative pump and system circuits and typical applications. Write today. THE OILGEAR COMPANY, 1582 W. Pierce Street, Milwaukee 4, Wis.

For more details circle NED-708 E5 on enclosed inquiry slip

TAKES THE THROB OUT OF POWER

PENFLEX TUBING

"SOAKS UP" VIBRATION . . . PROVIDES SMOOTHER COOLING OPERATION

WHEN A 16-cylinder, 1,750-hp diesel engine roars into action, the air-cooling and circulation piping really has to "take it." This particular installation performs perfectly because it is equipped with Penflex Flexible Metallic Tubing. A 5-foot length of air-jacketed 14" interlocked Penflex Tubing reaches from exhaust to stack. Its tough, rugged, "seep-proof" construction holds exhausts tight as a pipe . . . yet it is flexible enough to absorb the constant vibration.

In the power field you have many calls for Penflex—for air and gas lines, for transmission of oil, steam, and liquids. There is a complete line of steel, bronze, and aluminum Penflex Flexible Tubing, Hose and Couplings in sizes from ⅛" to 24" I.D.

Write today for new illustrated data book on "Flexineering"—the science of engineering flexible tubing to your specific job.

Pennsylvania Flexible Metallic Tubing Company, Inc.
7208 Powers Lane, Phila. 42, Pa.

PENFLEX

HEART OF INDUSTRY'S LIFE LINES

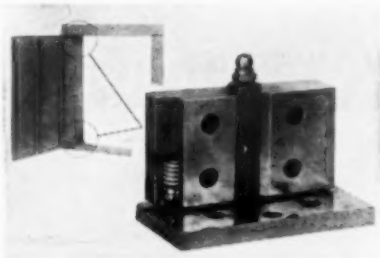
For more details circle NED-709 E5 on enclosed inquiry slip

OPTICAL LENSES & PRISMS now provided by expanded facilities

Lenses, prisms, optical flats and windows as well as complete optical subassemblies are now engineered to user's needs. Solution of optics problems is also offered as service of company's enlarged designing and engineering department. Co-operation on prototypes will be extended. Small quantity orders as well as production runs can be readily accommodated. Products and services offered by **Zenith Optical Laboratory,** 1942 Great Neck Rd., Copiague, L. I., N. Y.

For more details circle NED-710 E5 on enclosed inquiry slip

PRESSURE-LUBRICATED HINGE eliminates door squeaking, sagging



The sagging and squeaking of access doors on petroleum tank - trucks and other vehicles is eliminated with Warren SSS pressure - lubricated hinges. Installed by welding or bolting to door and frame, hinges have wide possibilities for industrial application. Threaded pivot bearing harbors grease and eliminates end play. Spring-loaded ball detent positions door in any one of three positions. Made by **Betts Machine Co.,** Dept. G, 1800 Pennsylvania Ave. W., Warren, Pa.

For more details circle NED-711 E5 on enclosed inquiry slip

ROTARY TRIMMER CAPACITOR in 0.5-3.0 and 1.0-4.5 uuf ratings

Glass midget rotary trimmer capacitor only ¾-in. long features smooth trimmer adjustment. It is available in 0.5 to 3.0 and 1.0 to 4.5 uuf ratings, and Q is 500 at 50 megacycles. Temperature coefficient of trimmer body is 200 ppm. Constructed of glass tubing with coating of metal bonded to it, trimmer capacitor has self-lubricating nylon bushing threaded to take a 6-32, class 2 type screw. Bushing has strong positioning lugs which resist stress and assure positive seating in chassis. Made by **Corning Glass Works,** Dept. 21, Corning, N. Y.

For more details circle NED-712 E5 on enclosed inquiry slip

Self-Sticking Markers Cut Maintenance Time and Costs

Self-Sticking Markers which cut maintenance time and costs are available from the W. H. Brady Co., Milwaukee. One of their widely-used products, ALL-TEMPERATURE PIPE MARKERS, stick permanently to pipes as hot as 300°F. Millions of them in use in plants of all types today. They conform to ASA standards and give you a fool-proof, cost-cutting method of pipe identification. Write for Bulletin No. 135-B.

Brady Self-Sticking DOTTED LINE AISLE MARKERS offer a fast, low-cost way to mark aisles. They are so tough they outwear painted lines 5 to 1. Miles and miles of aisles are marked with these markers in plants everywhere. Write for Bulletin No. 141.

A quick, economical method for marking areas, bays, posts, bins, pallets, etc., is found in Brady Self-Sticking All-Purpose NUMBERS and LETTERS. These individual NUMBERS and LETTERS let you make up any combination of markings right on the spot. Stocked in six sizes, these handy Markers fit many plantwide Marking needs perfectly. Write for Bulletin No. 165.

Manufacturer: W. H. Brady Co., 736 W. Glendale, Milwaukee 12, Wis.

For more details circle NED-713 E5 on enclosed inquiry slip

A LITTLE MORE— BUYS A LOT MORE

The world's finest general shipping room machine.

Counterboy 120

with Adjustable Moistening Control

You can have the best — for very little more than ordinary machines . . . and you'll save important dollars in years of trouble-free tape dispensing. All steel precision-made construction guarantees smoother, faster, easier sealing. COUNTERBOY 120 is built to last!

Inquire about big LABOR SAVINGS possible with Counterboy 120-A, which cuts all reinforced tapes. Your Better Packages' man is listed in phone book—call him for FREE Trial, specify model..

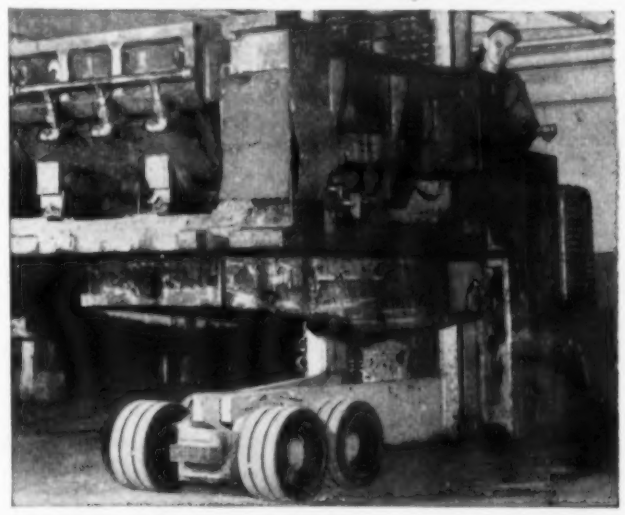
BETTER PACKAGES, INC.
Plant #1-C, 253 Canal Street, Shelton, Conn.

For more details circle NED-714 E5 on enclosed inquiry slip

B.F.Goodrich

TIRE AND WHEEL TW

ANALYSIS lengthens tire service, cuts costs for Willys Motors



OVER 2,000 materials handling units carry dies, motors, parts and the like throughout the vast Willys Motors plant in Toledo, Ohio. Oil and grease attack the industrial tires, railroad tracks bruise them, steel shavings tear at them. Virtually every existing threat to tire life can be found in the Willys complex materials handling set-up.

That's why the company turned to the B. F. Goodrich Tire and Wheel Analysis man. He studied Willys' operations, recommended the right tire types, sizes, tread designs and tread compounds for each of their varied jobs. The result, says Major Mechanic Harold Roberts, is that "these industrial tires give us far longer, trouble-free service—and this saves us money."

Find out how the FREE TW Analysis can save you money

No matter what your materials handling problems are, you can benefit from a FREE B. F. Goodrich Tire and Wheel Analysis. Just call your local B. F. Goodrich retailer or mail the coupon. The TW man will survey your equipment, loads and hauling surfaces. The tire and maintenance recommendations he makes will be *unbiased*, because B. F. Goodrich makes a *complete* line of industrial tires. Act now—let your B. F. Goodrich man show you how to start saving. He may cut your tire costs as much as 50%. A special TW Analysis Plan is available for manufacturers of industrial equipment.

Specify B. F. Goodrich tires when ordering new equipment

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

The B. F. Goodrich Company
Tire & Equipment Division
Department TW-501, Akron 18, Ohio

Please send me:
- ☐ Additional information on your Tire and Wheel Analysis Plan
- ☐ Free copy of "Industrial Tire Guidebook"
- ☐ Free copy of "How to Get Extra Service out of Solid Industrial Tires"

Name_____
Company_____
Street_____
City_____ Zone____ State____

For more details circle NED-715 E5 on enclosed inquiry slip

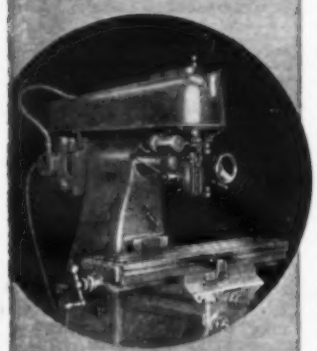
does MORE work... MORE easily

new POWER FEED HEAD U. S. Vertical Miller

Here's the new U. S. Vertical Miller with Power Feed Head—the head into which U. S. has built all the most wanted features without sacrificing traditional U. S. simplicity. Check its infinitely variable feed rate, its 800 pounds of down thrust on the quill, its supplemental hand feeds—it is the milling head that was designed to meet all shop needs.

Add to these the basic advantages of the U. S. Vertical Miller. You can easily see why it's the milling machine that "does more work more easily".

more versatile
Feed infinitely variable from .002" to .008" while in operation
greater capacity
5½" power quill travel; 800 lb. down thrust
more convenient
Supplemental hand feeds
increased rigidity
Enclosed hard chrome plated quill with internal lock



Write for descriptive folder

THE U·S·Burke MACHINE TOOL DIVISION
2 Brotherton Rd., Cincinnati 27, Ohio

▲ For more details circle NED-716 E5 on enclosed inquiry slip ▲

PALMER *presents*

an outstanding improvement in

DIAL THERMOMETERS

- No Sector
- No Pinion
- No Linkage
- Constant Accuracy
- Easy Readability

external calibration

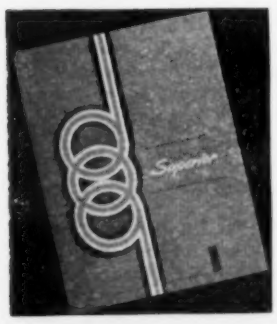
Full 3½" Dial Face

WRITE FOR BULLETIN 350

PALMER THERMOMETERS, INC.
Norwood Ave., Cincinnati 12, Ohio
Mfrs. of Industrial Laboratory Recording and Dial Thermometers

▲ For more details circle NED-717 E5 on enclosed inquiry slip ▲

Technical information about Superior Hydraulic Tubing



This brand-new 6-page booklet gives complete information concerning Superior Hydraulic Tubing, including maximum working pressures, bursting pressures, velocity and flow charts, ordering information, etc. Use the coupon to obtain your free copy.

Seamless hydraulic tubing has been a SUPERIOR specialty for many years, and the production of this low-carbon tubing is a quality operation. The steel used is of a non-aging type, made under a special melting process to insure low yield strength and unusually high elongation. Carbon content is held to 0.12% maximum for greater ease of bending and flaring, and each order is tested for flareability. All tubing is given a 100% hydrostatic test at pressures well above the minimum required by SAE-JIC specifications. Sizes range from ⅛" to 1⅛" OD.

MAIL THE COUPON TODAY FOR YOUR FREE COPY OF THIS INFORMATIVE BOOKLET

SUPERIOR TUBE COMPANY
2018 Germantown Avenue, Norristown, Pa.

Please send me at once a free copy of Bulletin 39—"Superior Hydraulic Tubing."

Name_____
Title_____
Company_____
Street_____ Zone____ State____

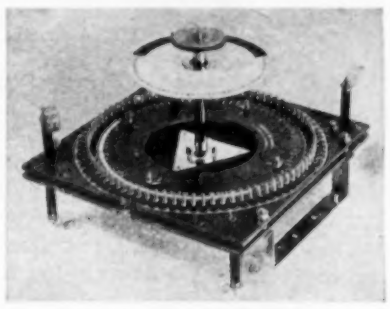
▲ For more details circle NED-718 E5 on enclosed inquiry slip ▲

REMOTE PRESSURE INDICATORS in 3 and 7-in. scale lengths

Electric circuit employed in Teledyne pressure indicating instruments employ no moving parts other than those in the meter. Model 168 indicator has precision meter with 3-in. scale length, while model 170, illustrated, is equipped with circular scale meter with scale length of 7 in. for extremely accurate reading. Both models operate from 105/130-v 60-cycle single-phase ac line and are companion instruments to model 158 electrical pressure transmitter. Built-in regulated direct current power supply operates complete transmitter-indicator system, including the strain gage bridge circuit. Connecting leads can be any reasonable length. Made by **Taber Instrument Corp.**, Section 16, 111 Goundry St., North Tonawanda, N. Y.

▲ For more details circle NED-719 E5 on enclosed inquiry slip ▲

MULTI-POSITION SWITCHES designed for special applications



Of instrument quality, line of special - purpose switches includes rotary, self-cleaning and multi-position types. High voltage sections are available for these controls with complete shaft insulation. Illustrated model is an 81-position two-circuit switch of continuous rotating type. Individually spring-loaded contacts are silver plated. Silver plating over copper in printed circuit type rotor provides low contact resistance and long life. Special application switches are available from **Industrial Instruments, Inc.**, 89 Commerce Rd., Cedar Grove, N. J.

▲ For more details circle NED-720 E5 on enclosed inquiry slip ▲

FRACTIONAL HORSEPOWER MOTORS are instantly reversible

Because there is no internal relay to delay reversing action, line of fractional horsepower motors is instantly reversible. A compact high - voltage capacitor helps start and reverse heavy loads. Motors are designed for use on door operators, machine tools, cranes and hoists and are offered in ¼, ⅓, ½ and ¾-hp ratings. They operate on either 115 or 230-v 60-cycle ac at 1725 rpm. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ For more details circle NED-721 E5 on enclosed inquiry slip ▲

SMOKER'S ACCESSORIES for industrial and commercial use

Illustrated silver and copper-glow finished round-tray smoker with glass inset ash tray is one of sixteen products developed for use in offices, building lobbies, industrial plants and commercial establishments. Line consists of desk ash trays, wall type sand urns, floor sand urns, water type smoker urns, hour-glass sand urns, smokers and stands. They are made of aluminum alloy which resists scratches and dents, and are non-tarnishing and stain resistant. Lustrous finish needs no polishing, and silver or copper glow finish is integral part of the metal so that it cannot chip off. Made by **Aluminum Cooking Utensil Co.**, Dept. NED-1, Fifth Ave. & Eleventh St., New Kensington, Pa.

▲ For more details circle NED-722 E5 on enclosed inquiry slip ▲

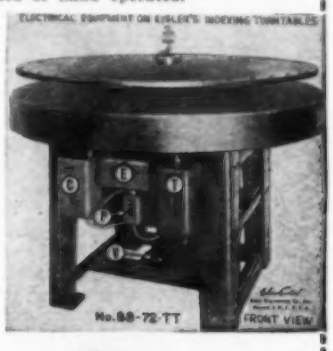
EISLER FOR 35 YEARS

We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. . . Motorized or hand operated.

Eisler Indexing Turntables are completely electrically controlled



AND CAMS MADE TO YOUR SPECS!

Write for catalog and full details now!

EISLER ENGINEERING CO., INC.
740 SO. 13th ST., NEWARK 3, N. J.
Charles Eisler, Jr., President

▲ For more details circle NED-723 E5 on enclosed inquiry slip ▲

For Small Production Runs

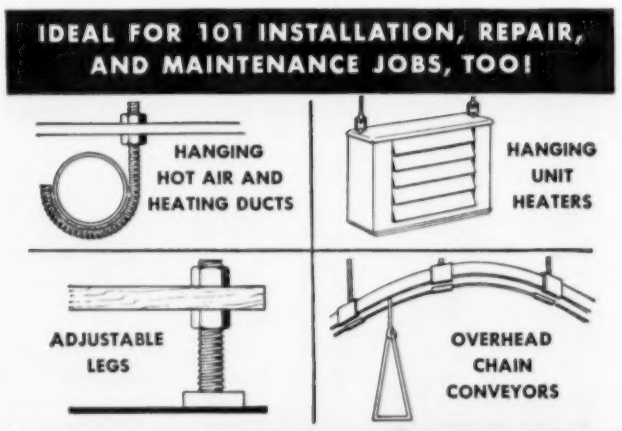
Cut Your Studs, Bolts, Hangers from REDI-BOLT®

CONTINUOUSLY THREADED STEEL RODS
13 SIZES, 3/16" TO 1½"

Small-run requirements for special studs, bolts, etc., are easy to handle, if you have a supply of REDI-BOLTS on hand. You just cut REDI-BOLT to the length you need . . . even heat and bend it . . . and add standard nuts. No threading necessary. These continuously threaded steel rods eliminate the need for "big" special-bolt inventories and the expense of small-quantity purchases.

REDI-BOLT is cold-drawn steel—20% stronger than ordinary steel! Available in standard lengths of 24" and 36" with *Standard National Coarse* and *SAE* or *National Fine* threads. Other lengths on special order.

IDEAL FOR 101 INSTALLATION, REPAIR, AND MAINTENANCE JOBS, TOO!



Made by the makers of REDI-ROD Steel and Aluminum Bars

Ask your Mill Supply House, or write
REDI-BOLT, Inc., 5312 Indianapolis Blvd., East Chicago, Ind.

▲ For more details circle NED-724 E5 on enclosed inquiry slip ▲

Powered by the press ram... independent of the die

2 SIZES Cuts steel up to 1/16" thick

3" WIDE $69 6" WIDE $95

Guaranteed — money back if not 100% satisfied

New LOW prices on the JACO AUTOMATIC STOCK REEL

WRITE FOR FULL DETAILS TODAY!

Dealer Inquiries Invited

JACO DEVICES, INC.

95 High Street • Hingham, Mass.

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. . . makes sweet music

Pianos contain American Quality Felt in various types to assure good tone, instant action and acoustical correction. Piano felts are most exacting, and American leads in this field. No wonder industrial users find that American felts make sweet music for them, protecting the performance and reputation of the machines that use them for lubrication, sealing, vibration control, filtration, honing, weatherstripping, insulation. It is important to select the right type of felt; American engineers will collaborate with you on specific applications.

FREE! Booklet on the use of economical and efficient felt mountings for machines, absorbing up to 85% of vibration. Write for "How to Reduce Vibration."

GENERAL OFFICES: 62 GLENVILLE ROAD, GLENVILLE, CONN.

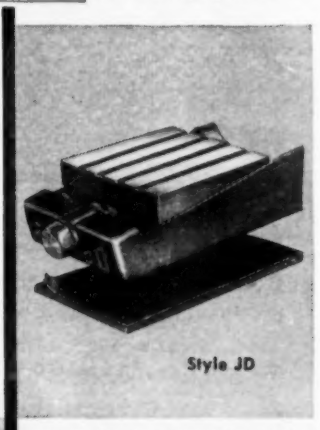
SALES OFFICES: New York, Boston, Chicago, Detroit, Cleveland, Rochester, Philadelphia, St. Louis, Atlanta, Dallas, San Francisco, Los Angeles, Portland, Seattle, Montreal.—PLANTS: Glenville, Conn.; Franklin, Mass.; Newburgh, N. Y.; Detroit, Mich.; Westerly, R. I.—ENGINEERING AND RESEARCH LABORATORIES: Glenville, Conn.

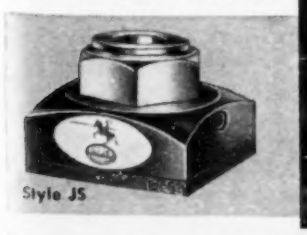
▲ For more details circle NED-726 E5 on enclosed inquiry slip ▲

CUT MACHINE MAINTENANCE COSTS with EMPCO leveling jacks

EMPCO Leveling Jacks cut down on set-up time and keep maintenance costs to a minimum! They provide a solid, level support for machine tools, assembly fixtures, industrial furnaces, and all types of production equipment. Machines leveled with EMPCO Jacks are easily installed and relocated—maintain new-machine performance longer! Equipment can be re-leveled in a matter of seconds by a simple turn of the hex screw.

VI-SORB Mounting Pads are optional with EMPCO Jacks. They control vibration from within the machine itself, and reduce transmitted vibrations.





Available in two styles and 6 models, there's an EMPCO Jack for your every requirement. Write today for complete information and illustrated bulletin!

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION

2727 JEROME AVENUE • DETROIT 12, MICHIGAN

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ELECTRIC MICROMETER
for checking machinery alignment

Vertical and horizontal alignment of heavy machinery, aircraft jigs, transfer machine and other equipment can be quickly checked to within 0.0002-in. with this electric micrometer. Checking can be done over substantial distances. Furnished with micrometer are a magnetic-base platform and a C-clamp which facilitate mounting instrument almost anywhere and in any position. Instrument's simple, rigid construction insures long service even with rough handling. Made by **Ingersoll Milling Machine Co.,** Dept. CC, 2410 Douglas St., Rockford, Ill.

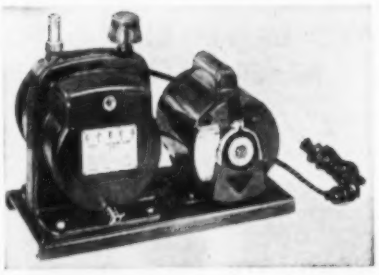
▲ For more details circle NED-728 E5 on enclosed inquiry slip ▲

VAPOR-TIGHT LAMP
magnetic base facilitates mounting

Areas of heavy moisture or dampness in which bulb explosions occasionally occur can be illuminated with this Magic Vapor - Tite lamp. Unit employs Spero Electric Co. UL-approved vapor-proof fixture with 100-w bulb capacity and a permanent Alnico V, neoprene covered, 45-lb lift magnet as base. The 25-ft, 16-gage three-conductor, type SO neoprene cord has three-prong nonvapor-tight plug. Cord is impervious to oils, sunlight and most acids. Made by **Standard Portable Cord Co.,** Dept. CL, Mayville, N. Y.

▲ For more details circle NED-729 E5 on enclosed inquiry slip ▲

MECHANICAL VACUUM PUMPS
operate quietly, with no vibration



In addition to quiet, vibrationless operation, Hyvac 7 mechanical vacuum pumps now produce free air displacement of 70 liters per minute as compared with 57 liters for former models. Ultimate vacuum is 0.1 micron. This model will pump from atmospheric pressure to ultimate pressure in less than 5 minutes. Unit weighs 89 lb, stands 13 in. high and requires 8½ x 17½ in. floor space. It is available with standard or explosionproof ⅓-hp motor for 115/230 v or 220/440 v three-phase 50/60 cycles. Other features include easily viewed oil level window, fast oil drain and intake O-ring connector coupling which saves time in assembly and disassembly of vacuum system. Made by **Central Scientific Co.,** 1702 Irving Park Rd., Chicago 13, Ill.

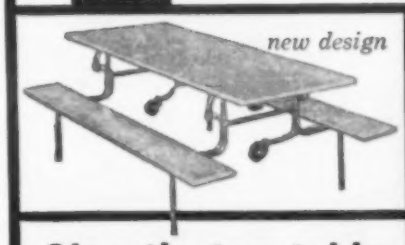
▲ For more details circle NED-730 E5 on enclosed inquiry slip ▲

PIPE TOOL POWER DRIVE
has tray-equipped folding tripod

Hand pipe tools can be power operated with the Ridgid No. 200 power drive, offered on a folding tripod with integral tray. Small, lightweight unit permits unobstructed swing of die stock handles. Speed Chuck grips any pipe, conduit or rod tightly, forward or reverse. Centering device at rear automatically centers and holds pipe. Power unit alone can be bolted to bench or truck and is equipped with pipe benders and slots for hanging tools. Capacity is ⅛ to 2-in. pipe or conduit, ¼ to 2-in. pipe or conduit or ¼ to 2-in. bolts. Power is sufficient for gear tools to 12 in. Made by **Ridge Tool Co.,** 125 Ridge Rd., Elyria, O.

▲ For more details circle NED-731 E5 on enclosed inquiry slip ▲

new free catalog answers table-seating problems



Sico tip-top table

Quick folding, easy rolling table-bench combination. Table top is 15 square ft.—yet top and attached benches store in area only 1 ft. by 6 ft. Seats 8 adults comfortably. Table top is tough mellamine plastic. Folding frame is heavy, 14 gauge structural steel, zinc lustron plated for lasting protection and beauty. New single leaf design is functional, sanitary. Durable SICO quality construction suits unit to many applications—work table, cafeteria, employee lounges, even outdoors. Folds easily and quickly with no latches or locks. Table top measures 72 by 30 in. Vertical grain, fir benches are 6 ft. by 9 in. Big 4 in. rubber casters give portability. Available in other sizes and heights. Full specifications in FREE catalog.

fast-storing

in less space

at lower cost

Just off the press

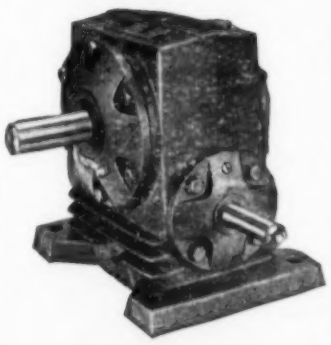
Presents an entire new concept of industrial and institutional seating that saves time and space. Describes and illustrates each table and table-bench combination in the SICO line. Write today to:

SICO

manufacturing co.
6049 Pillsbury Ave. S.
Minneapolis 19, Minn.

▲ For more details circle NED-732 E5 on enclosed inquiry slip ▲

NEW DESIGNED BY **BOSTON Gear** to give you *Certified* MAXIMUM HORSEPOWER PER DOLLAR — by actual test



- 20% Less space . . . less weight
- Higher gearing efficiency
- Finned housings for better cooling
- Fan cooling optional on larger sizes

100 SERIES **REDUCTORS RATIOMOTORS**

NEW COMBINATION Construction

Permits removal of motor at any time without disturbing gear unit. Also, original motor may be easily replaced with one of special characteristics (explosion-proof, etc.). Saves on maintenance and extends range of applications.

FLANGED REDUCTORS

are Ratiomotors without motors. You buy and install standard end-mounted motors of your own choice.

108 MODELS • 671 DIFFERENT UNITS FROM STOCK

GET NEW CATALOG R-56 FROM YOUR

BOSTON Gear DISTRIBUTOR

or write: BOSTON GEAR WORKS
69 Hayward St., Quincy 71, Mass.

55BG-R-291

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Write for this NEW Booklet on "DOWN TIME"

It's Free

It tells how the Servis Recorder shows up all stops and delays of plant machinery . . . thus enabling you to REDUCE DOWN TIME . . . Booklet also describes how process operations can be accurately timed.

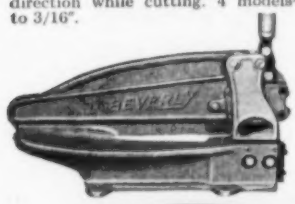
Write for your copy today • The Service Recorder Co. 1375A Euclid Avenue • Cleveland 15, Ohio

▲ For more details circle NED-734 E5 on enclosed inquiry slip ▲

Save Time... Labor... Material with BEVERLY metal cutting SHEARS

throatless SHEARS

Make any cut—straight, irregular, curved. Exclusive design permits turning work any direction while cutting. 4 models—cap. to 3/16".



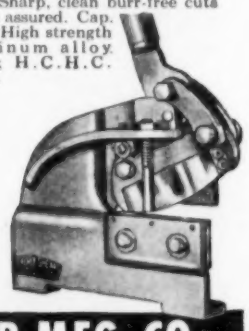
Inside SLOTTER

Makes cuts up to 8" inside edge of sheet. Sharp, clean burr-free cuts always assured. Cap. 16 ga. High strength aluminum alloy body; H.C.H.C. blades.

slitting SHEAR

New "SS" Series—easier cutting with compounded linkage. 3 models—cap. to 1/16"; trimming capacity to 1/4" mild.

See your Beverly Distributor. Write for FREE illustrated Bulletin.



Beverly SHEAR MFG. CO.

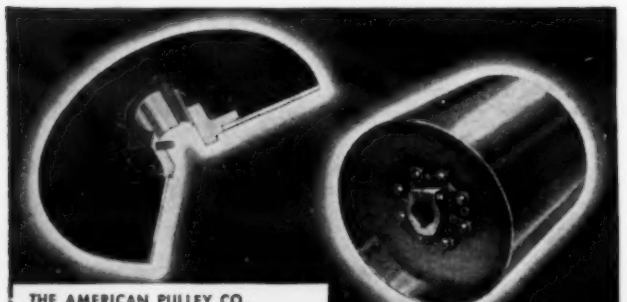
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

▲ For more details circle NED-735 E5 on enclosed inquiry slip ▲

NEW PULLEY DESIGN MEANS LONGER LIFE, LOWER COSTS, LESS MAINTENANCE

The new design American Pulleys are the best friends a conveyor belt ever had. They're easier to install, built to take the severest kind of service, and cost next to nothing to maintain because they are fully dirt- and splash-proof. Size for size, they will outwear, outwork any other pulleys made.

New Type "HD" Pulley features the Wedg-Tite Hub, a special interchangeable split-tapered design which combines maximum strength with minimum weight to give the greatest shaft grip ever developed in a conveyor pulley. Two other types—Type "L" for light and medium duty, and Type "O" a steel split model—round out the new line to cover all types of service. See your distributor or write today for full information. There is no obligation.



THE AMERICAN PULLEY CO.
4294 Wissahicken Ave.
Philadelphia 29, Pa.

Please send full information on the new American Conveyor Pulley Line.

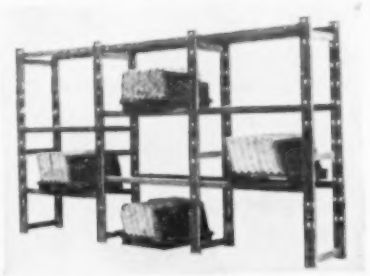
Name_____
Company_____
Address_____
City_____ Zone____ State____

Power Transmission by AMERICAN PULLEY COMPANY

At the Profit End of the Machine

▲ For more details circle NED-736 E5 on enclosed inquiry slip ▲

ADJUSTABLE STORAGE RACKS used in single or multiple sections



Vertical uprights of these adjustable storage racks have double slots set at angles to give rigidity and prevent swaying. Adjustable members can be removed by hand and placed at any desired level. Braces are welded to front and back panel uprights for depth specified. Used in single, double or multiple sections, racks afford a complete tiering range. Removable shelves and pairs of channels for skid leg support are also made to requirements for use with the racks. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

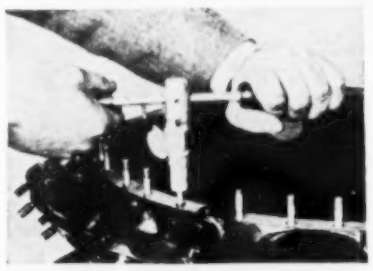
▲ For more details circle NED-737 E5 on enclosed inquiry slip ▲

HYDRAULIC LIFT TABLE elevates 2000-lb loads to 48 in.

Usable as adjustable workbench, weld positioning table, press feeder table and for materials handling, hydraulic lift table has integral hand-operated pump. Table measures 20 x 30 in. with a capacity of 2000 lb. Hydraulic unit has capacity of 3000 lb, is hand pumped 1/4-in. per stroke, and is lowered fast or slow with simple release valve. Elevating range is between 30 and 48 in. from floor. Entire unit is mounted on two 5-in. swivel and two 5-in. rigid casters for maneuverability. Floor lock, actuated and released with foot pedal, will anchor truck in any desired position. List price is $169.50. Made by **Lexco Engineering & Mfg. Corp.**, Dept. E, P. O. Box 349, Colmar, Pa.

▲ For more details circle NED-738 E5 on enclosed inquiry slip ▲

STUD DRIVER-EXTRACTOR handles 3/16 to 3/4-in. studs



Of collet type, this Service Bi-Way Studder can be used to drive and extract studs ranging in size from 3/16 to 3/4-in. in both NF and NC threads. Tool features fast, sure, automatic gripping action; instant shifting to pulling action; and fully adjustable control over driving depth. For removal of broken or stripped studs, a serrated collar will extract studs with as little at 1/8-in. exposed length. Tools are fitted for either power tool or hand operation. Distributed by **E. V. Nielsen, Inc.**, 135 Broad St., Stamford, Conn.

▲ For more details circle NED-739 E5 on enclosed inquiry slip ▲

PRESSURE SWITCH models for pressures to 5000 psi

Easily installed, maintained and replaced series SG1-02 pressure switch is a gasket-mounted unit for application to hydraulic presses, production and processing machinery, machine tools and similar oil-hydraulic equipment. Three models are available for 100 to 1000, 100 to 2000 and 500 to 5000 psi ranges. Pressure settings are adjustable throughout the complete range. All models measure 7 11/16 x 3 7/8 x 2 in. Nominal current ratings are 10 amp at 110-125 v ac for the lowest range model, 5 amp at 220-250 v ac for intermediate size and 3 amp at 440-460 v ac for the highest range. Subplate is available to permit mounting where a machined pad is not provided. Made by **Vickers Inc.**, 1456 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-740 E5 on enclosed inquiry slip ▲

Delpark-Dings

MAGNETIC COOLANT SEPARATOR

for Honing, Lapping, Grinding, Shaving, Broaching, Milling, Metal Roll Forming Mills, Oil Reclamation Processes.

Removes metal from coolant by magnetic attraction. May be used independently or as a pre-filtration separator. Used independently, it removes metal capable of responding to magnetic field. When used as pre-filtration separator, reduces load on filter.

Gives finer finishes, fewer rejects, longer tool and wheel life, reduced maintenance costs and down time. Capacities to 100 g.p.m.

Write for More Information

Backed by more than 40 years experience in Industrial Filtration

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVENUE • LEBANON, INDIANA

▲ For more details circle NED-741 E5 on enclosed inquiry slip ▲

Want more facts on the new re-rated motor?

The new Westinghouse Life-Line® "A" motor incorporates exclusive Bondar together with Bondite and Mylar* which gives it the strongest insulation of any motor on the market.

For all the facts on the Life-Line "A", send for a free copy of B-6154-A—or, for a free demonstration of the facts, contact your Westinghouse sales engineer or nearby distributor. J-21884

*Du Pont Registered Trade-Mark

YOU CAN BE SURE...IF IT'S Westinghouse

▲ For more details circle NED-742 E5 on enclosed inquiry slip ▲

PYREX

GAUGE GLASS & CYLINDERS

furnished in any length or finish

● For fast service on Pyrex Tubular Gauge Glass, contact Swift! We can supply Tubular Gauge Glass or Cylinders from stock in any length or finish . . . 2 mm. O.D. to 7" O.D. . . . for chemical, pharmaceutical or industrial applications. Write, wire or phone for immediate delivery.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC., ELMIRA, N.Y.
330 Tenth St., San Francisco 3 ● 140 Boylston St., Boston 16
807 Mateo St., Los Angeles.

▲ For more details circle **NED-743 E5** on enclosed inquiry slip ▲

In a quarter turn . . .

FULL ROUND FLOW

(as round as the pipe itself)

EXCLUSIVE FEATURES

ROCKWOOD

QUICK OPENING AND CLOSING
needs only a quarter turn even under full pressure.

LONGER WEAR RESISTANCE
Chrome-plated bronze ball withstands abrasion, pitting, scratching.

LEAKPROOF • FULL ROUND FLOW
Plan now to put these benefits to work in your plant. Valves come in all pipe sizes. Tested and listed by Underwriters' Laboratories, Inc.

FREE BOOKLET — Write today for full information. Rockwood Sprinkler Company, 505 Harlow St., Worcester 5, Mass.

ROCKWOOD BALL VALVES
For full round flow efficiency

▲ For more details circle **NED-744 E5** on enclosed inquiry slip ▲

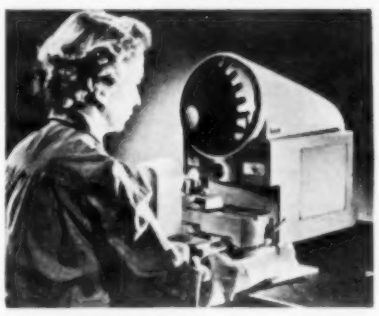
▲ For more details circle **NED-745 E5** on enclosed inquiry slip ▲

BALANCING MACHINES
pneumatic speed-button operated

Speed - button control replaces hand-operated lever in SB series of balancing machines. Control consists of two pushbuttons, marked "balance" and "off" which activate pneumatically - operated lifting device to balance the part involved. Amount and location of unbalance can be read immediately. By pressing off button, equipment immediately returns to inoperative position. A number of SB models is available to handle not only very light piece parts, but parts as large as 60-in. diameter. Made by **Taylor Dynamometer & Machine Co.**, Dept. N, 6411 River Pkwy., Milwaukee 13, Wis.

▲ For more details circle **NED-746 E5** on enclosed inquiry slip ▲

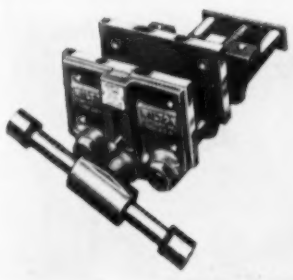
BENCH TYPE CONTOUR PROJECTOR
economically checks small parts



Magnifications of 10, 20, 31¼, 50, 62½ and 100 times are provided by model 8 portable bench type contour projector. It is designed for economical checking of small parts which can be inspected by staging in simple holding fixtures for horizontal projection or can be placed on an easily mounted glass stage, with the machine turned on end, for vertical projection. Projection Ektar lenses are rigidly mounted and easily interchanged. Relay lens system gives ample, uniform working clearance at all magnifications. Wheeled stand which permits horizontal or vertical use of projector is also available. Made by **Eastman Kodak Co.**, Special Products Sales Div., Dept. E, 343 State St., Rochester 4, N. Y.

▲ For more details circle **NED-747 E5** on enclosed inquiry slip ▲

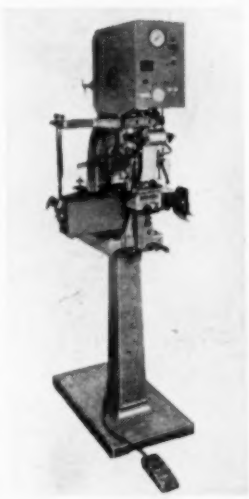
WOODWORKING VISE
features continuous and rapid action



Available in eight models in continuous screw or rapid-acting types, professional woodworking vises are designed for heavy duty service. Rapid Titan models change from free-sliding action to screw-lock action automatically. With the screw and nut engaged, tightening action can continue a complete turn or more. Hardwood or steel handles are optional. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 9525 Irving Park Rd., Schiller Park, Ill.

▲ For more details circle **NED-748 E5** on enclosed inquiry slip ▲

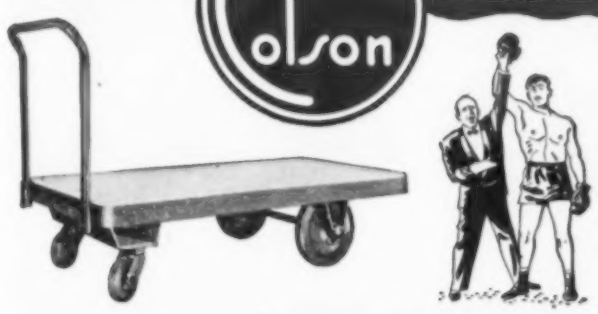
EMBOSSING MACHINE
prints 20 to 80 objects per minute



Trademarks, tradenames or designs can be embossed on electrical components, plastics and other objects by the model 79A embossing machine. Semiautomatic in operation, it is equipped with conveyor feed and ejection, making possible marking of 20 to 80 objects per minute. No adjustment for stock thickness variations is required. Printing head of the air operated machine can be equipped with self-adjusting die jaws for solid embossing dies, or it can be provided with a slide-in master plate head to allow interchanging of variables. Thermostatically controlled printing head makes durable imprints in gold, silver or colors. Made by **Markem Machine Co.**, 150 Congress St., Keene 49, N. H.

▲ For more details circle **NED-749 E5** on enclosed inquiry slip ▲

PUSH-E-Z Colson® **TRUCKS**



Heavyweight Champ
that takes any beating you can give it

It's the strongest hand truck ever built—more than you need for ordinary loads. Capacity with metal or molded plastic wheels, 6000 pounds, with cushion tread, rubber tire, 3000 pounds. Platform of steel or selected hard wood.

Comparative tests show that this truck, fully loaded, starts and rolls with but slightly more than half the effort required to move the average factory truck.

Write today for descriptive folder

THE COLSON CORPORATION
Elyria, Ohio
Casters • Hand Trucks • Lift-Jack Systems
Hydraulic, Electric and Mechanical Power Lifts and Transports

▲ For more details circle **NED-750 E5** on enclosed inquiry slip ▲

Cut cost of mixing fluids with this portable mixer

Much faster, cheaper than hand mixing. Make your own low-cost mixing vessel from any open tank, drum, kettle or other container. Just add the proper size LIGHTNIN Portable Mixer.

Get fast, thorough mixing of any fluids—always uniform, every batch just right. Blend, stir, dissolve, wash, suspend solids, wet fine powders quickly. Tell us what you want to mix—we'll **guarantee** results.

LIGHTNINs just don't wear out. Thousands in use; many in service **20 years and more**. Built with ball-bearing motors, for continuous duty. Thirty models, ⅛ to 3 HP. Electric or air driven. Direct drive, gear drive. Wide choice of motors, materials. **Send for Portable Mixer Catalog B-108.**

MIX BIG BATCHES QUICKLY WITH TURBINE-TYPE UNIT
Get the one flow pattern that's correct for your mixing operation; guaranteed to give you top results. Series "E" LIGHTNIN Mixers are made in hundreds of power-speed combinations. For open or closed tanks, top or bottom entering standard stock parts and mountings. Factory assembled, ready to install. Sizes 1 to 500 HP. *Send for Catalog B-102.*

NEW LOW-COST MIXING OF VERY LARGE BATCHES
For tanks up to 6 million gallons capacity, you can get LIGHTNIN Side Entering Mixers with new cartridge-type rotary seal that eliminates stuffing-box maintenance forever. Seal runs years without attention—and you can replace it in a few minutes if ever necessary. *Send for Side Entering Mixer Catalog B-104 and LIGHTNIN Seal Bulletin B-111.*

Lightnin® Mixers
MIXING EQUIPMENT Co., Inc.
165-e Mt. Read Blvd., Rochester 11, N. Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 10, Ont.

▲ For more details circle **NED-751 E5** on enclosed inquiry slip ▲

SPECIAL BRONZE BUSHINGS

Made to your specifications and dimensional tolerances. Every order—large or small—delivered on schedule. For complete information on Moccasin Bushings, write for Engineering Data Chart No. 429.

Quality Bronze Since 1908

MOCCASIN BUSHING CO.
2000 CHESTNUT ST., CHATTANOOGA 8, TENN.

▲ For more details circle NED-752 E5 on enclosed inquiry slip ▲

Could your METAL COATINGS meet this "battery test?"

When autos stall, this tow-car battery kit starts them. It consists of a storage battery and two 20-foot cables, all carried in a 16-gauge, deep-drawn chest coated inside with plastisol based on BAKELITE Brand Vinyl Resins.

Think of the service conditions...Weather extremes. Moisture. Corrosion. Acid spillage. Rough handling. Ask yourself whether any of your present metal coatings could endure such abuse.

This plastisol coating is applied over a one-coat primer that can bond it fast to steel, copper, brass, aluminum, or galvanized iron. Soft and rubbery, the plastisol cushions the load and acts as electrical insulation, besides protecting the metal chest. It can be formulated for application by dip or spray... can form a coating that's soft, resilient, and decorative, or hard, tough, and thick. Slush-molded plastisol based on BAKELITE Vinyl Resins forms the clamp grips in this kit.

To finish the story, the outside of the chest is protected by a spray coating based on BAKELITE Vinyl Resins—making the job 100% vinyl coated. If you want protective coatings like these, investigate by writing Dept. CB-119.

Dennis Chemical Co., St. Louis, Mo., makes the plastisol based on BAKELITE Vinyl Resins which is used on this battery box made by Atlas Tool Mfg. Co., and distributed by Associated Equipment Corp., St. Louis, Mo.

BAKELITE BRAND Vinyl Dispersion Resins

BAKELITE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC

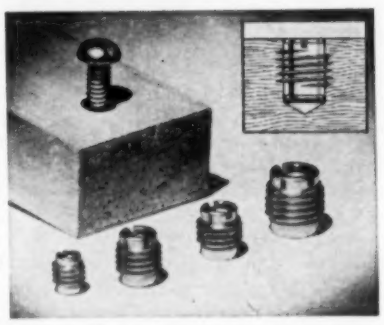
▲ For more details circle NED-753 E5 on enclosed inquiry slip ▲

CLEANER-TOWEL CABINET dispenses waterless hand cleaner

Dispenser for waterless liquid hand cleaner is combined with a paper towel dispensing cabinet for installation in any work area. Models available have single metering dispenser on a single - fold towel cabinet and a choice of single or twin metering dispensers on a double - fold towel cabinet. They are wall mounted. Each quart-size polyethylene dispenser provides about 300 hand cleanings with each filling. Made by **Hammons Products, Inc.**, 1143 W. Wildwood, Ft. Wayne, Ind.

▲ For more details circle NED-754 E5 on enclosed inquiry slip ▲

THREAD INSERTS FOR WOOD provide steel threads for bolts



Readily inserted in drilled hole in wood surfaces, Knife-Thread inserts provide durable steel tapped thread in which bolts or screws can be used. Fasteners can be assembled and disassembled many times without damage to threads or loss of holding power. Inserts have blade-sharp external thread which cuts its way into the wood without crushing the fibers. Hold is extremely tenacious. Chromium plated to corrosion resistance, inserts are available in many sizes with both fine or coarse machine threads. Made by **Rosan, Inc.**, 2901 W. Coast Highway, Newport Beach, Calif.

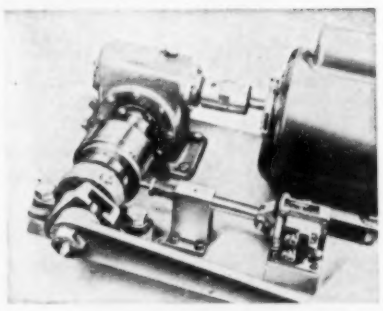
▲ For more details circle NED-755 E5 on enclosed inquiry slip ▲

SPEED REDUCTION UNITS in ratios from 5:1 to 3600:1

Compact design and improved worm gearing are featured by 100 series Reductors available in 52 standard stock models. This line of speed reducers comprises 283 different units with ratios from 5:1 to 3600:1 and output torque ratings from 40 to 9400 lb-in. Fins on housings improve heat dissipation. Fan cooling is optional on larger sizes, except the compound units. Made by **Boston Gear Works**, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle NED-756 E5 on enclosed inquiry slip ▲

PROPORTIONING PUMP feeds 1 to 72 slugs per minute



Equipped with solenoid or air-cylinder operated single-revolution clutch, this Uni - Feeder proportioning pump delivers from 1 to 72 metered slugs of fluid per minute. Motor and gear reducer operate continuously, and pump completes one revolution whenever solenoid or air cylinder is energized by means of electrical contacts or air-control devices. Energizing can be controlled according to time cycle, flow, pH, color, concentration or any other meterable factor. Exact volume of slug pumped each revolution is adjustable. Pumps are available with capacities from 0.000093 to 27 gpm. Made by **Philadelphia Pump & Machinery Co.**, 353 Wynnewood Ave., Wynnewood, Pa.

▲ For more details circle NED-757 E5 on enclosed inquiry slip ▲

Handy Pump says:

"The New Blackmer *Flo-master* is here to give you a lift with your liquid handling problems"

FLO - MASTER — the latest addition to the Blackmer family of fine hand pumps.

BLACKMER PUMPS — liquid materials handling ®

BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

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FREE

INFORMATIVE BULLETIN

How to set new highs in precision measurement of low temperatures

This special low-temperature Alnor Pyrometer is invaluable for balancing hot water heating systems, checking floor, wall or ceiling temperatures in panel heating systems, measuring temperature of refrigerated coils, insulation and all other low temperatures. Sturdy and completely portable, the Type 2300 can be taken anywhere—and give precise, direct readings in from 3 to 5 seconds.

Tear out this ad and attach it to your letterhead. Mail to Illinois Testing Laboratories, Inc., Room 529, 420 North La Salle Street, Chicago 10, Illinois.

Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-759 E5 on enclosed inquiry slip ▲

Daylon safety shoes

...they make your ladders safer

approved and labeled by Underwriters' Laboratories

Your straight ladders will have a firmer grip on the ground or on the floor with these popular Dayton Safety Ladder Shoes. Neoprene rubber suction treads really grip slippery floors—and—a simple turn and spike steel tips dig into the ground for real security and safety. The base is 16-gauge steel. Side plates are 13-gauge steel. Lock nuts, spring washers assure precision adjustment. Treads are renewable. All zinc plate finish.

For FREE literature write Dept. E

Daylon *safety ladder co.*
2339 Gilbert Ave., Cincinnati, Ohio
In Canada—SAFETY SUPPLY CO., TORONTO

▲ For more details circle NED-760 E5 on enclosed inquiry slip ▲

Cut "DOWN" time and Maintenance Costs

with the NEW K-500 Drain and Supply line Cleaner — for lines from 1¼ to 12"

Especially designed for industrial maintenance departments the K-500 works wonders in opening clogged industrial or sanitary drains and supply lines. To reduce costly "down" time to a minimum, the K-500 is completely "packaged." The machine, sectional cables and assorted cutting tools are all carried on the ball-bearing wheel dolly from which the machine operates. Easily and safely handled by one man, this rugged and dependable machine drives up to 200' of sectional cable through all traps and bends. (Larger power units are available for longer runs.)
700 R.P.M. cable speed assures fast and complete cleaning. Patented, instant-acting clutch provides finger-tip starting, stopping or reversing. Electric, air or gasoline power.

Hundreds of "famous names" have proved the superiority of Kollmann machines. Ask us about those in your field.

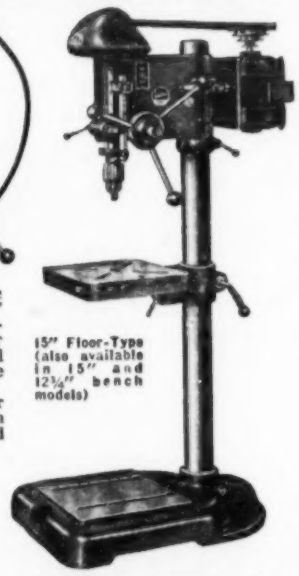
KOLLMANN MFG. CO. • ERIE, PA.

▲ For more details circle NED-761 E5 on enclosed inquiry slip ▲

Atlas 15" DRILL PRESS gives you more where it counts!

The Head is the Heart of a Drill Press!

. . . and the ATLAS head is the biggest, most rigid of any 15" drill, with column bearing surfaces spaced 8" apart for greater rigidity, accuracy! More ball bearings, too . . . 2 supporting the spindle pulley, 2 the spindle . . for greater smoothness, longer service. Quick-positioning depth control stop . . . 3-spoke feed wheel . . . built-in switch.



15" Floor-Type (also available in 15" and 12¾" bench models)

- Massive table, column and base for most accurate work.
- High speed model has 4-step pulleys. Speeds: 580, 1300, 2440, 5200 RPM.
- Slo speed model has 5-step pulleys. Speeds: 400, 680, 1370, 2750, 4400 RPM.

Write for FREE Catalog

Atlas Press Company
Quality Machine Tools Since 1911
ATLAS WOODWORKING POWER TOOLS
ATLAS METALWORKING MACHINE TOOLS
CLAUSING HEAVY DUTY MACHINE TOOLS
515 N. Pitcher St. Kalamazoo, Michigan

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SHEETS TUBES

C-D-F GIVES FAST, LOW COST SERVICE ON ANY FORM, SIZE, OR SHAPE OF DIAMOND VULCANIZED FIBRE

Diamond Fibre is a genuine vulcanized fibre with good electrical insulating qualities and great mechanical adaptability. It is arc-resistant and non-corroding. It forms readily and is often used where high strength, toughness, and low cost must be combined.
C-D-F sells Diamond Fibre in sheets, rolls, strips, rods, tubes, formed and machined specialties. Special grades include fibre for forming, tags, abrasive, bobbin, pattern, shuttle applications. Diamond Insulation (fish paper) and Built-Up Fibre are in the line. C-D-F also has a complete fabricating service for fibre receptacles, trucks, trays, cans and barrels.

Write for new 1955 Diamond Fibre Catalog.

Continental-Diamond Fibre
NEWARK 30, DELAWARE

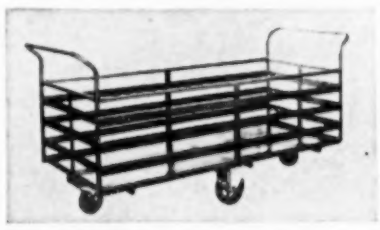
▲ For more details circle NED-763 E5 on enclosed inquiry slip ▲

CABLE FORMING VISE
two sizes handle up to 1-in. rope

On-the-spot makeup or repair of slings, hoisting cables, guy wires, winch lines and other wire rope or cable devices is simple matter with this cable vise. After cable is placed in position between the formed jaws and adjustable throat pieces, thimble is inserted. By tightening screw, loop is securely molded around the thimble to form a perfect loop or eye. Cable clamps, sleeves or splicing is then applied. Type A vise handles ⅛ to ½-in. diameters and type B, ⅜ to 1-in. cables. Offered by **Key Co.**, 2601 McCasland Ave., East St. Louis, Ill.

▲ For more details circle NED-764 E5 on enclosed inquiry slip ▲

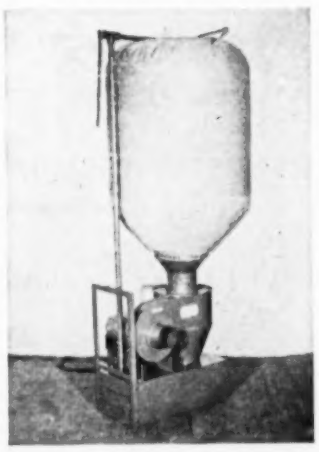
CUSTOM-BUILT HAND TRUCKS
for specific handling operations



Hand trucks are available custom-built to meet the needs of special materials handling operations at a cost no greater than stock trucks. Typical of these special models is illustrated welded steel utility truck which has swivel type 6-in. casters with molded-on rubber tires. Sturdy angle iron sides, steel pipe handles and solid steel deck afford strength and durability for heavy duty service. Capacity is 2800 lb. Custom-built trucks offered by **Leebaw Mfg. Co.**, Dept. A, 65 Wayne Ave., Youngstown 2, O.

▲ For more details circle NED-765 E5 on enclosed inquiry slip ▲

DUST COLLECTING UNIT
collects both fine and coarse dusts

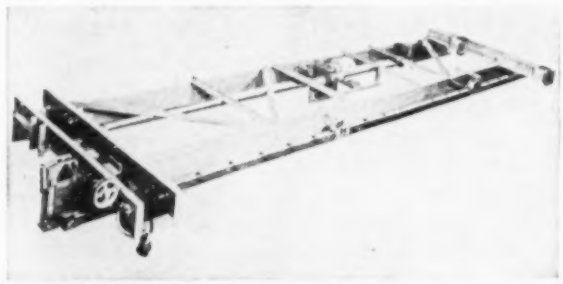


A cloth filter bag and a mechanical preseparator are combined in Dustkop 5C20 dust collecting unit designed to collect both fine and coarse dust simultaneously. Bag traps the fine dust not separated from air stream by centrifugal action of cyclone separator. A single upright supports the bag for easy installation in the field, and a shaker handle imparts snapping action to its sides for cleaning dust from inside surface. Thus, fine dust falls freely into single dust bin with coarse dust for emptying in one action. Made by **Aget Mfg. Co.**, 1396 E. Church St., Adrian, Mich.

▲ For more details circle NED-766 E5 on enclosed inquiry slip ▲

OVERHEAD CRANE
fluid drive gives smooth operation

Designed to speed materials handling, line of fluid drive cranes includes capacities from 1 to 5 tons with spans of 16 to 40 ft. Totally-enclosed high-torque



ball bearing motors, designed for crane service, drive crane through a smooth-operating shock-protecting fluid coupling that affords even acceleration. Double-reduction helical gear reducer is equipped with Timken tapered roller bearings throughout. Quick-acting electric solenoid spring-actuated brake closes immediately whenever current is interrupted. Made by **Philadelphia Tramrail Co.**, 3422 N. Weikel St., Philadelphia 34, Pa.

▲ For more details circle NED-767 E5 on enclosed inquiry slip ▲

Brainard TWO-WAY Strapping Service

STEEL STRAPPING

STRAPPING TAPE

● Only Brainard offers *both* steel strapping and strapping tape. Only Brainard salesmen can give you unbiased recommendations on the strapping method best for *your* job. The Brainard strapping system can reduce your handling costs . . . help deliver your products in better condition.

Brainard SHARONSTEEL
STEEL DIVISION
SHARON STEEL CORPORATION

Send for FREE CATALOG on Brainard products and tools. Write Brainard Steel Division, Dept. Y-5, Griswold Street, Warren, Ohio.

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every part guaranteed!

PIPE WRENCHES

Be sure with the wrench that does the job best!...and *keeps* working through the hardest service...NYE! Nye wrenches are so well made that we guarantee them *without exception* and will replace ANY part that fails in service without charge!

- Hardened forged jaws
- Exclusively designed hook jaw teeth ground to remove scale and prevent slippage
- Special alloyed malleable iron handle ends breakage
- Wide handle designed for comfortable grip
- Safety nubbin on end of handle
- Baked enamel finish

At your local Supply House or write for catalog.

NYE TOOL COMPANY
4120-4130 Fullerton Avenue Chicago 39, Illinois
"The Tools You Swear By and Never At"

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One coat protects

RUST-CURE STOPS RUST

With RUST-CURE, you can achieve maximum rust and corrosion protection without use of costly prime coatings . . . save on labor and materials.

One application of RUST-CURE seals, protects, improves appearance. Easily applied on new metal or directly over firm rusted surfaces by brush, spray, dip. Available in all colors. AA-1272

Requires minimum surface preparation.

THE MONROE COMPANY, INC.
10703 Quebec Avenue • Cleveland 6, Ohio

For more details circle NED-770 E5 on enclosed inquiry slip

CLIMAX MOLYBDENUM COMPANY, Dept. 18
500 Fifth Avenue, New York 36, N. Y.

Please send me the 208-page handbook "Alloy Steels Pay Off"

Name _____

Company _____

Title _____

Address _____

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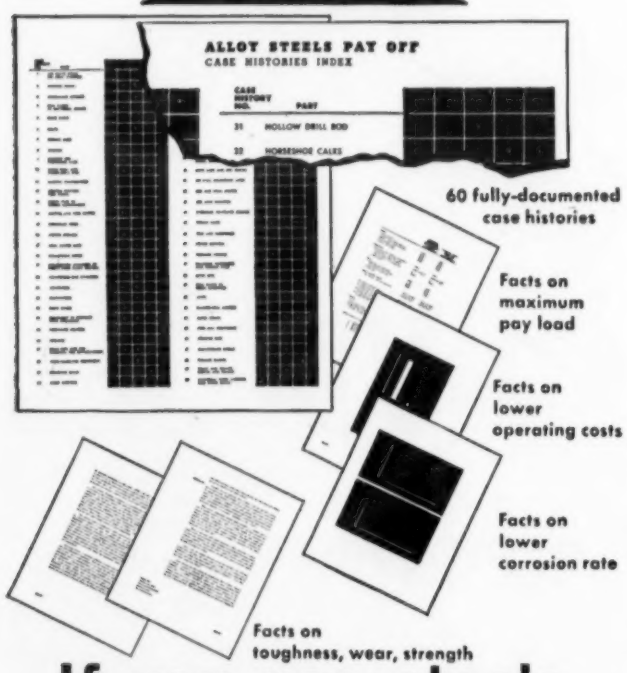


If you use steels, here's the handbook you should have

This fact-packed handbook is a must for you if you use steel. Here, in completely documented form, you'll find how the use of alloy steels adds economies, increases service life, offers many other advantages.* Cost-conscious executives will find the full story on these economies of alloy steel in the first section of the handbook. Designers and metallurgists will find the advantages of alloy steels in the 60 case histories. Get your copy today. Climax Molybdenum Company, 500 Fifth Avenue, New York 36, New York.

MS5-13

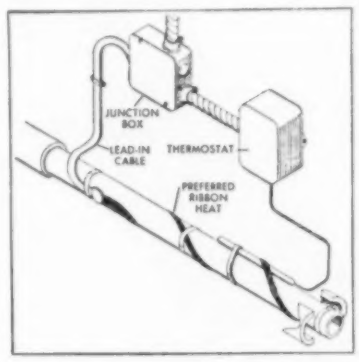
* Advantages of ALLOY STEELS	
	• longer life • greater pay load • lower operating costs • greater safety • less maintenance

CLIMAX MOLYBDENUM

For more details circle NED-771 E5 on enclosed inquiry slip

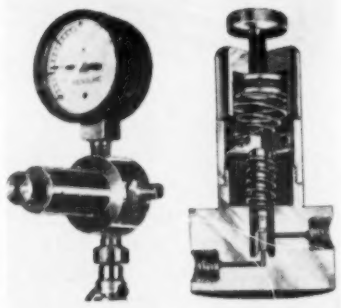
FLEXIBLE TAPE HEATER for heating fluid-carrying lines

Convenient means for heating pipelines such as those carrying residual oil from fuel tank to pump and heater is provided by Ribbon Heat, a low temperature lineal heater in the form of flexible tape. The tape, ½-in. wide and 1/10-in. thick, is made of fusible alloy resistance wires, suitably braided, insulated and protected for continuous use under all service conditions. It will maintain pipe line temperature at either 100 or 120° F. End of tape is attached by waterproof connection to 3-ft sheathed cable, thence to electric supply. Thermostatic sensitive bulb, strapped against pipe leads to thermostatic control. Cable is connected to any standard electric outlet box. Made by **Preferred Utilities Mfg. Corp.**, Dept. NED, 1860 Broadway, New York 23, N. Y.



For more details circle NED-772 E5 on enclosed inquiry slip

PRESSURE REGULATOR for pneumatic or hydraulic uses



Initial pressures of over 3000 psi are instantly reduced to the desired pounds or ounces per sq in. and maintained at this setting without further adjustment by this pressure regulator. It has only three working parts and is designed to accept any sudden pressure load. Device consists of a brass cylinder and barrel which contains a brass piston and two cadmium plated steel springs. Entire unit measures 1½ x 3 in., exclusive of gage. Pipe connections are available as desired. Made by **Beacon Devices, Inc.**, Dept. A, 78 Oliver St., North Tonawanda, N. Y.

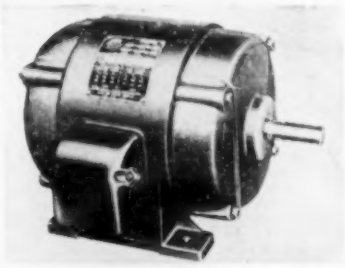
For more details circle NED-773 E5 on enclosed inquiry slip

HERMETIC TERMINAL easily assembled with staking unit

Assembled through 11/64-in. round punched holes in electrical or electronic equipment, double-gland double-seal hermetic terminals employ simple rivet setting tool to stake the hollow end. Terminals have solid silicone rubber two-part body and Strat - O - Brass metal parts. They operate in temperature range of −100° F to 500° F. Three sizes are available with flashover points up to 15,000 v rms. Made by **Strat-O-Seal Mfg. Co.**, Dept. NED, 3039 W. Fullerton Ave., Chicago 47, Ill.

For more details circle NED-774 E5 on enclosed inquiry slip

ELECTRIC MOTORS feature double-end ventilation



Small frame industrial alternating current motors, built to NEMA standards, incorporate low air opening in end bell combined with a steel baffle plate to protect winding from moisture and abrasive dusts in the dripproof design. Double-end ventilation is provided by dual cast aluminum fans. Motors use double-width prelubricated sealed ball bearings. All standard ratings are available in frame sizes 182, 184, 213 and 215. Models up to 30 hp will be available. Made by **Lima Electric Motor Co.**, 78 Findlay Rd., Lima, O.

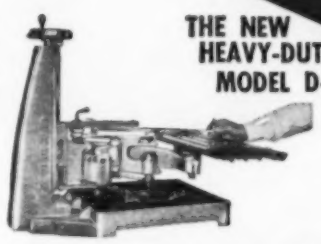
For more details circle NED-775 E5 on enclosed inquiry slip

unique in design — rugged in construction

GREEN PANTOGRAPH ENGRAVERS

THE FAMOUS MODEL 106

THE NEW HEAVY-DUTY MODEL D-2



The three-dimensional bench Model 106 cuts costs — engraves, routs, models and profiles, giving you expert results even by unskilled workers.

The Model D-2 two dimensional heavy-duty Pantograph is a precision machine with a multitude of new features. Open on three sides, it permits complete freedom for engraving, milling, profiling large panels (up to 30" in diameter) or bulky pieces. Single, micrometer adjustment controls vertical depth of cut, automatically adjusting copy table with pantograph. Range of reduction ratios from 2-to-1 to infinity! Vertical range over 10 inches!

For complete information, write to

GREEN INSTRUMENT COMPANY
375 Putnam Ave. Cambridge, Mass.

For more details circle NED-776 E5 on enclosed inquiry slip

SPRAY PAINTING MASKS
A competent engineering staff will counsel with you on the most efficient technique for handling your particular requirements.

CLAMPS AND FIXTURES
Positive pressure and exact registration of the part in the mask. Reduce rejects. Free both hands for productive movements.

CUT FINISHING COSTS THROUGH INCREASED PRODUCTION

PRODUCT DEVELOPMENTS BY CM CONFORMING MATRIX

AUTOMATIC MACHINES
Increase production hundreds to one over hand methods. Reduce labor costs. Eliminate need of experienced workmen.

Send for Free Literature Now!

MASK WASHING MACHINES
50% faster than any other make. Cut solvent consumption. Avert production delays due to damaging of masks by hand scrubbing.

CONFORMING MATRIX CORPORATION
338 Toledo Factories Building Toledo 2, Ohio

For more details circle NED-777 E5 on enclosed inquiry slip

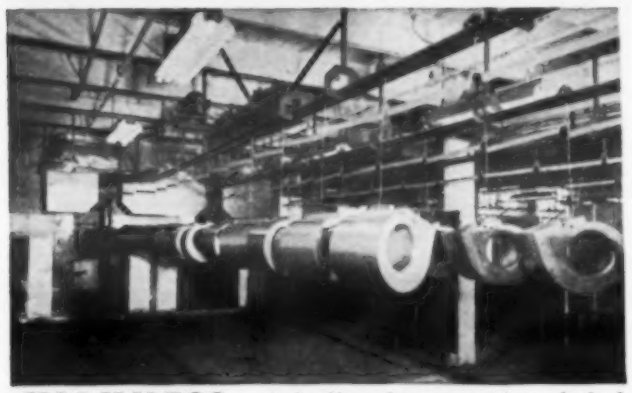
". . . . and under the picture say that my new assistant proposed packaging in Clearsite Plastic Containers."

Choose from a wide selection of feather - light, sparkling - bright, shatter-proof Clearsite Containers, or have special sizes made to your specifications. Any trademark or label can be multi-color printed right on the container.

Write for free samples and descriptive literature.

CELLUPLASTIC CORPORATION
General Offices:
44 Avenue L, Newark 5, N. J.

For more details circle NED-778 E5 on enclosed inquiry slip



CHAINLESS CONVEYOR Cuts Labor Costs 50%

Increases Capacity Improves Finish

Recommended for loads up to 100 lbs. per ft.

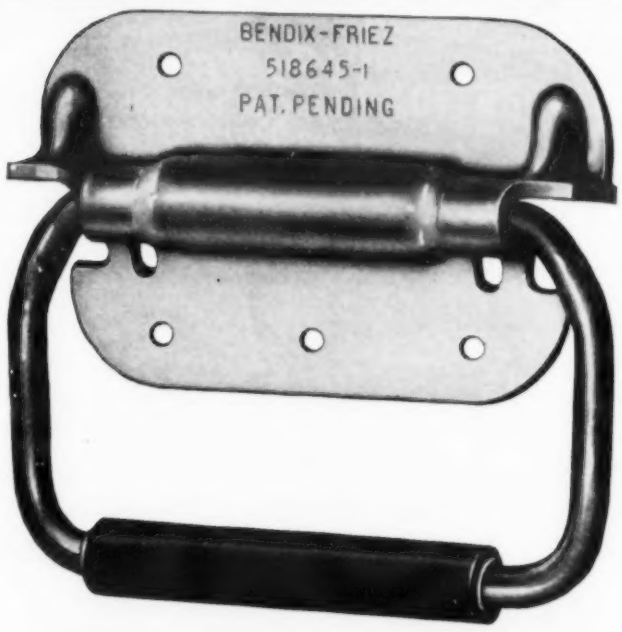
A leading furnace maker slashed paint-spraying labor costs 50% with the Landahl CHAINLESS Conveyor! Elimination of second shift brought more uniform finishing. Capacity of the paint room was increased 33%. Conveyor has no chains, no cables, no take-up troubles. Unique steel-rod connectors pivot freely at both ends on self lubricating ball-and-socket joints. Makes shorter turns, weighs less, has fewer parts. Powered by special Landahl caterpillar drive.

Send For Bulletin G-100

LANDAHL Chainless CONVEYORS

The LANDAHL CONVEYOR CO., 13116 Athens Ave., Cleveland 7, Ohio
A SUBSIDIARY OF THE AMERICAN MONORAIL COMPANY

▲ For more details circle **NED-779 E5** on enclosed inquiry slip ▲



BIG NEW HANDLE

Meets specifications of MIL-C-4150-A and MIL-T-945-A. Grasping handle has insulating sleeve that will not crack or chip at −65° F. or become sticky or tacky at +160° F.

If you have a carrying case problem, please read this. It's all about a new kind of handle.

It's a rattle proof handle

A reclaiming spring forces the grip down against the surface and holds it firmly in place.

It's sturdy and safe

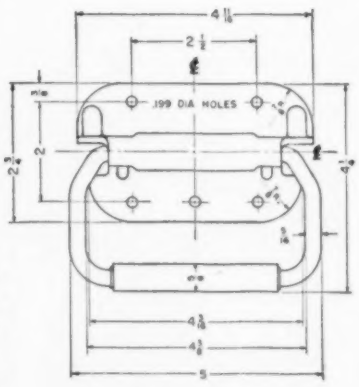
It has a "snap-back" feature ideally suited for many uses in industry where conventional type handles are not satisfactory. It is strong enough to lift 200 lbs. with an adequate safety factor. Fingers are free from pinching.

Corrosion proof

Made of carefully selected materials which are treated to provide maximum resistance to rust and corrosion.

Easily applied

Nuts and bolts, welding or other suitable fastening may be used as long as the surface to which it is attached is as strong as the back of the plate handle.



Bendix-Friez

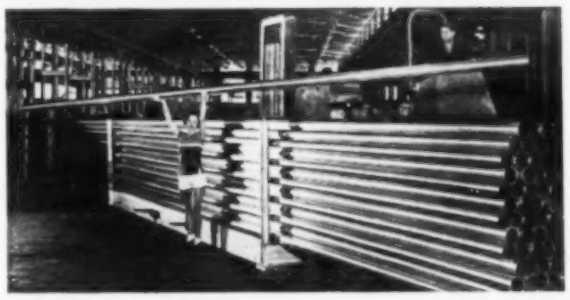
FRIEZ INSTRUMENT DIVISION OF BENDIX AVIATION CORPORATION
1444 TAYLOR AVENUE, BALTIMORE 4, MARYLAND
Export Sales, Bendix International Division, 205 E. 42nd St., New York 17, N. Y., U. S. A.

▲ For more details circle **NED-780 E5** on enclosed inquiry slip ▲

New Processes and Materials

ALUMINUM PIPE for corrosive construction uses

Thin layer of special aluminum alloy on both the inner and outer surfaces of Alclad welded Construction pipe adapts it for unusually corrosive service.



Coating is integral part of pipe and gives protection to the 3004 aluminum alloy core. Pipe is available in 3, 4 and 6-in. diameters and in 20, 30 and 40-ft lengths. Prices and wall thicknesses are the same as for Alcoa extruded aluminum Construction pipe. Yield and bursting strengths are approximately those of 6063-T6 extruded pipe. Weld bead is fully removed from the outside of the pipe, and partially removed from the inside. Made by **Aluminum Co. of America**, 758 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-781 E5** on enclosed inquiry slip ▲

WATERLESS SKIN CLEANSER offered in 16-oz metal container

SBS-30 waterless skin cleanser is now available in 16-oz metal container for on-the-job use. Product thoroughly cleanses skin of industrial grimes, greases, paints, oils and other irritating soils without water. Containing Lanolin, SBS-30 is a super-refined, cosmetic grade cleanser that can be used by men and women plant workers. Free sample is available. Made by **Sugar Beet Products Co.**, 315 Waller St., Saginaw, W.S., Mich.

▲ For more details circle **NED-782 E5** on enclosed inquiry slip ▲

WIRE SIZE CHART split gages in decimal sizes

Suitable for wall mounting, this 21 x 36-in. split-gage wire chart is available for reference purposes. It shows split gages in decimal sizes. Large readable figures makes this wall chart extremely easy to use. Chart is offered free of charge to wire users by **Mettler Machine Tool, Inc.**, Adeline St., New Haven, Conn.

SPLIT GAUGES IN DECIMAL SIZES

1/8	.490	6	.192	18	.0473	30	.0160
	.483		.188		.0459		.0158
7/0	.476	6	.185	19	.0443	30	.0156
	.468		.181		.0426		.0154
3/16	.4615	7	.177	19	.0410	31	.0152
	.454		.173		.0394		.0151
6/0	.446	7	.170	19	.0379	31	.0150
	.438		.166		.0363		.0149
3/16	.4305	8	.162	20	.0348	32	.0148
	.421		.159		.0340		.0146
5/0	.412	8	.155	20	.0332	32	.0143
	.403		.152		.0325		.0141
1/4	.3938	9	.1463	21	.0317	33	.0138
	.386		.145		.0309		.0135
4/0	.378	9	.142	21	.0301	33	.0133
	.370		.138		.0294		.0130
5/16	.3625	10	.135	22	.0286	34	.0104
	.355		.131		.0279		.0102
3/0	.347	10	.128	22	.0272	34	.0100
	.339		.124		.0265		.0097
3/8	.331	11	.1205	23	.0258	35	.0095
	.325		.117		.0251		.0094
2/0	.319	11	.113	23	.0244	35	.0093
	.313		.109		.0237		.0091
7/16	.3065	12	.1055	24	.0230	36	.0090
	.301		.102		.0224		.0089
1/0	.295	12	.099	24	.0217	36	.0087
	.289		.095		.0211		.0086
1/2	.283	13	.0915	25	.0204	37	.0085
	.278		.089		.0198		.0084
1	.273	13	.086	25	.0191	37	.0081
	.268		.083		.0187		.0081
9/16	.2625	14	.080	26	.0181	38	.0080
	.258		.078		.0179		.0079
2	.253	14	.076	26	.0177	38	.0078
	.248		.074		.0175		.0076
5/8	.2437	15	.072	27	.0173	39	.0075
	.239		.070		.0171		.0073
3	.235	15	.067	27	.0168	39	.0072
	.230		.065		.0165		.0070
11/16	.2253	16	.0625	28	.0162	40	.0069
	.221		.060		.0159		.0068
4	.216	16	.058	28	.0156	40	.0067
	.212		.056		.0153		.0067
13/16	.207	17	.054	29	.0150	41	.0066
	.203		.052		.0148		.0065
5	.199	17	.051	29	.0145	41	.0064
	.196		.0491		.0143		.0063

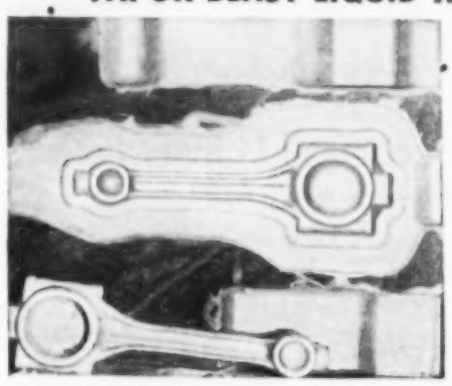
▲ For more details circle **NED-783 E5** on enclosed inquiry slip ▲

ASPHALT TILE PLANKS form distinctive floor patterns

Unusual and effective flooring patterns are possible with introduction of Modnar asphalt floor tiles in 4-in. wide and 24-in. long planks, 1/8 and 3/16-in. thick. Cutting of planks to different lengths gives attractive random pattern. Because of size and shape, they are easy and fast to lay. Woodtone colors available are driftwood, oak, maple and walnut, and they can be used in one color or intermixed. Made by **Flintkote Co.**, Tile-Tex Div., 1211 McKinley Ave., Chicago Heights, Ill.

▲ For more details circle **NED-784 E5** on enclosed inquiry slip ▲

"Saved $7,072.00 in one year since finishing Forging Dies with VAPOR BLAST LIQUID HONING"



Vapor Blasting, increased production from these connecting rod dies by 20%, cut repair costs from $10.00 to 60¢ per die, saved cost of two men — $7,072.00 per year.

You, too, may enjoy similar savings with Vapor Blast Liquid Honing. Find out about it. Write, or make a date with the VB representative for recommendations — and the money-saving facts today!

VAPOR V-B BLAST MILWAUKEE WISCONSIN

VAPOR BLAST MFG. CO.
3063 W. Atkinson Avenue
Milwaukee 16, Wisconsin

▲ For more details circle **NED-785 E5** on enclosed inquiry slip ▲

SQUARE D CONTROL for SMALL SPOT WELDERS

Class 8992—Type BBG-1 NEMA 1A Weld Timer and size IW Welder Contactor in one enclosure.

Class 8991—Type TBS-6 NEMA 1A Safront Weld Timer.

● Consistent performance and ease of servicing make the Type BBG-1 combination or individual Type TBS-6 timer and suitable contactor the most efficient control for foot or motor-operated spot welders, 30 KVA and smaller.

Write for Small Spot Welder Control Bulletins, Square D Company, 4041 N. Richards St., Milwaukee 12.

SQUARE D COMPANY

▲ For more details circle **NED-786 E5** on enclosed inquiry slip ▲

America's featherweight production champs are breaking production records in plants from coast to coast.

It's FREE for the asking—this brand new catalog containing photographs and descriptions of dozens of different MALL air tools designed to help you boost production and cut costs. MALL air tools provide POWER UNLIMITED shift after shift . . . and at the same time eliminate worker fatigue because of their amazing lightness and compactness. MAIL THE HANDY COUPON BELOW FOR YOUR FREE COPY.

AT YOUR SERVICE
The MALL man in your area (with his mobile tool warehouse) will be glad to demonstrate the MALL power tools you ask to see. Phone or write the MALL office nearest you.

MALL TOOL CO. PORTABLE POWER TOOLS GASOLINE • ELECTRIC • AIR
7727 South Chicago Ave., Chicago 19, Illinois

RUSH me a free copy of MALL's new Air Tool Catalog No. 72.

Name_____
Company_____
Address_____
MU-166

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Now—cut metal 15 times faster than hand hack sawing!

Slice through 1½" cold-rolled steel in 41 seconds—through 3½" lead-sheathed copper cable in 90 seconds! This new *Portable* Band Saw is *fast—two and a half times faster* than bulky power hack saws!

It's light, compact—handles easily, goes anywhere there's a job to be done. *Continuous cutting action* delivers smooth, controlled sawing in any position, even in cramped quarters—on ferrous and non-ferrous metals, "problem" materials.

Saves its cost over and over—send now for complete specifications and performance data.

MODEL 524 PORTA-BAND — ONLY $215
WRITE TODAY FOR FULL INFORMATION

PORTER-CABLE Machine Company
5125 N. Salina Street
Syracuse 8, New York

Porter-Cable
Quality Electric Tools

▲ For more details circle NED-788 E5 on enclosed inquiry slip ▲

READ THIS . . .
before you buy or lease your next electric truck

A revolution has taken place in the materials handling field. With the advent of electric trucks designed for narrow-aisle operation a whole new concept of handling has evolved.

Here . . . in this new RAYMOND Catalog . . . are the trucks responsible for this revolution. These are the trucks which first made 6-ft. warehouse and production aisles possible . . . which today are increasing warehouse storage capacity as much as 50%. As you glance through this catalog, you'll discover how you can open up to electric truck service areas previously approachable only by hand truck. For example: your elevators, low-capacity floors, warehouse and production floor aisles, boxcars and truck trailers.

You owe it to yourself and your business to obtain this RAYMOND Catalog before buying or leasing an electric truck. Clip and mail the coupon now.

RAYMOND — ELECTRIC INDUSTRIAL TRUCKS HYDRAULIC ELEVATING EQUIPMENT

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COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle NED-789 E5 on enclosed inquiry slip ▲

New Literature and Catalogs

Railroad Safety Devices & Accessories

Nolan Co.—Essential service products for railroads and general industry are subject of illustrated 1955 catalog. Pictures, specifications and details of Nolan bumping posts, portable derails, car blocks, car stops, blue flags, rail skates, track dollies, and tool and supply cars are presented. Also described are re-railers, electric and manual lifts, tubular hand trucks and the new Lift-A-Load all-purpose loader.

▲ For more details circle NED-790 E5 on enclosed inquiry slip ▲

Phillips Screw Insert Bits & Holders

Continental Screw Co.—16-page illustrated bulletin "How Hy-Pro Phillips Insert Bits and Holders Save. . ." shows construction and explains ways in which these tools increase production efficiency, reduce number of rejects and safeguard quality.

▲ For more details circle NED-791 E5 on enclosed inquiry slip ▲

Drawn Closures & Metal Stampings

Hudson Tool & Die Co.—38-page illustrated catalog on precision drawn closures and metal stampings describes facilities of this company which possesses a complete battery of presses and hundreds of stock tools and dies. Tables give dimensions and pertinent data on standard square, rectangular and round cases; cover plate assemblies; square, rectangular and round covers; and special cases.

▲ For more details circle NED-792 E5 on enclosed inquiry slip ▲

Rotary Vacuum Filters

Filtration Engineers, Inc.—Continuous rotary filters in sizes ranging from 9.4 to 528 sq ft of filtering area are described in 24-page illustrated bulletin No. 103-B. Text explains how filter works and gives details of its application in the processing of chemicals, food, pharmaceuticals, ceramics, starches, industrial wastes, paper and pulp.

▲ For more details circle NED-793 E5 on enclosed inquiry slip ▲

Carbide Tools in Woodworking

General Electric Co., Carboloy Dept.—"Carboloy Cemented Carbides and Their Application in the Woodworking Industry" is a 28-page guide book to the substitution of carbide tooling on existing and new woodworking equipment. Advantages obtained with carbide tooling are clearly explained in bulletin WW-20.

▲ For more details circle NED-794 E5 on enclosed inquiry slip ▲

Electric Motors

Reliance Electric & Engineering Co. — "Super T Line D-C Motors with Dynamic Response" are subject of 12-page illustrated bulletin C-2002. Design and application information are given on motors ranging in capacity from 7½ to 250 hp for speeds from 500 to 1750 rpm.

▲ For more details circle NED-795 E5 on enclosed inquiry slip ▲

Hose Assemblies & Couplings

J. N. Fauver Co.—24-page illustrated catalog 55 deals with industrial hose assemblies, couplings, stems, swivels and accessories. Assemblies are available in any length in hose diameters ranging from 3/16-in. to 2-in. ID. Types are available for various pressure and temperature service. Both permanent and reusable couplings are described.

▲ For more details circle NED-796 E5 on enclosed inquiry slip ▲

Wood-Cutting Methods

DeWalt Inc.—"New Ways to Make Money on Your Cutting Jobs" is title of 16-page illustrated guide book which also describes wide range of sizes of radial arm type saws and woodworking machines. Various ways in which this machinery can be used to reduce costs and increase profit margins are explained.

▲ For more details circle NED-797 E5 on enclosed inquiry slip ▲

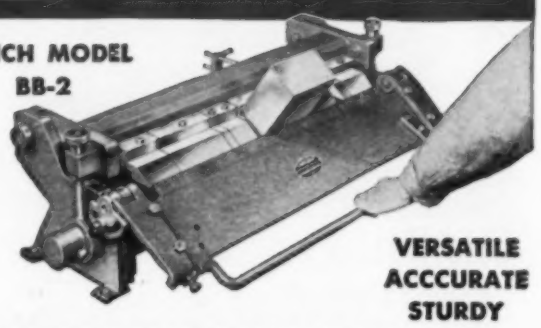
14-in. Variable Speed Lathe

Logan Engineering Co.—Features of the No. 6560 14-in. variable speed lathe are highlighted in 4-page bulletin 14-L. This lathe has 40-in. center distance and provides spindle speeds from 38 to 186 rpm and from 240 to 1200 rpm without stopping the lathe or shifting the belt. Bulletin lists lathe accessories and attachments.

▲ For more details circle NED-798 E5 on enclosed inquiry slip ▲

Bending Sheet Metal
UNIVERSAL BOX and PAN
CHICAGO BENDING BRAKE

BENCH MODEL
BB-2



VERSATILE
ACCCURATE
STURDY

This CHICAGO hand bending brake is ideal for bending sheet metal up to 16 gauge and 24" wide. Model and experimental shops, production departments find this machine unmatched for single pieces or production runs in folding, box and pan work, and a limitless variety of straight bending operations. Very little experience is required to do accurate and fast work.

Write for full particulars

Steel Bending Brakes for over 50 Years 6558

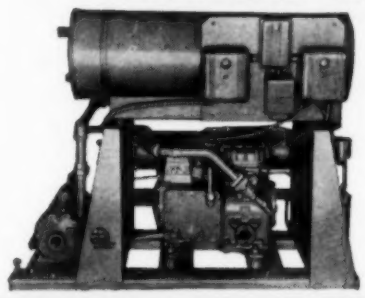
DREIS & KRUMP MANUFACTURING COMPANY
7436 S. Loomis Blvd., Chicago 36, Ill.
CHICAGO

▲ For more details circle NED-799 E5 on enclosed inquiry slip ▲

PROBLEM? AIR CONDITIONING INDUSTRIAL PROCESS COOLING

SOLUTION — Acme SYSTEM-ENGINEERED FLOW-COLD®

PACKAGED LIQUID CHILLER



"Packaged" complete with compressor. All controls, piping and wiring factory tested. Low installation cost — efficient, economical performance.

Capacities 2 thru 15 tons

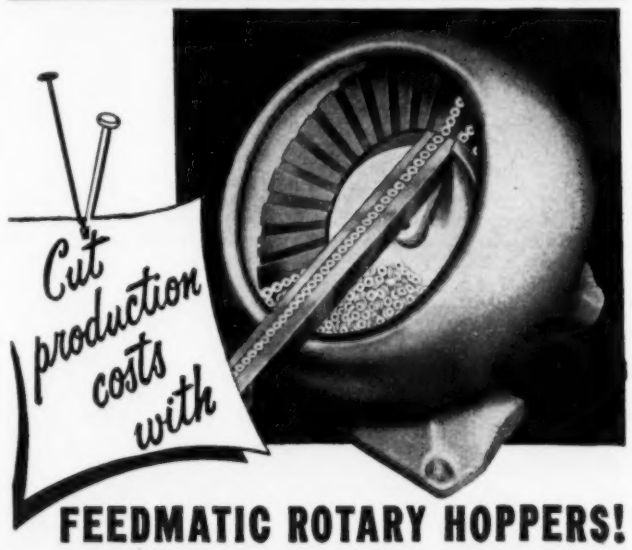
TYPICAL FLOW-COLD APPLICATIONS INCLUDE:

AIR CONDITIONING	PROCESS COOLING
Offices; office buildings	Annodizing & plating tanks
Research laboratories	Plastic molders
Special process rooms	Spot welding tips
Complete small plants	Coolant cooling

Write for Acme Flow-Cold Packaged Liquid Chiller Catalog No. 403.

ACME INDUSTRIES, INC.
JACKSON, MICHIGAN
Manufacturers of quality Air Conditioning and Refrigeration Equipment since 1919

▲ For more details circle NED-800 E5 on enclosed inquiry slip ▲



FEEDMATIC ROTARY HOPPERS!

Continuous Automatic Parts Feeder eliminates high-cost hand feeding! This compact automatic hopper efficiently feeds small parts—reduces assembly costs on all high-volume operations! Feedmatic continuously delivers parts in proper position for assembly through attached feed tracks. Feeds 3 to 5 times faster than hand-feeding! Hoppers can be designed with as many as four separate tracks.

Use Feedmatic for high-speed parts delivery to machine tools, presses, grinders, special machines—or for sorting, counting and inspection. Find out how you can cut costs in your operation with Feedmatic. Write today and send samples of your small parts!

WRITE TODAY FOR DESCRIPTIVE BULLETIN!

FEEDMATIC INC.
22517 TELEGRAPH ROAD DETROIT 19, MICHIGAN

▲ For more details circle NED-801 E5 on enclosed inquiry slip ▲

MARK CAN LIDS
...ACCURATELY
...ECONOMICALLY

MODEL SF-100-AE
EMBOSSING FIXTURE

This Fixture code marks all sizes of can lids up to one gallon, with one or more lines of lettering—with easily-changed type. A plastic matrix serves as the female die, which can be reused and does not have to be changed as characters are changed. Investigate today!

Write for Complete Data!

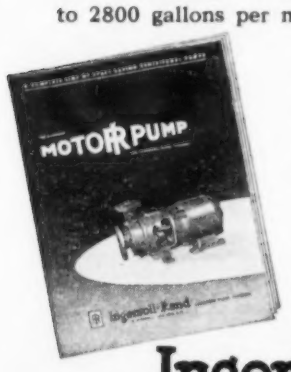
Mecco SAFETY MARKING TOOLS
M.E.CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.
For more details circle NED-802 E5 on enclosed inquiry slip

Are Your Pumps Dependable?

Dependability of your pumps may mean the difference between uninterrupted production and complete shutdown. You cannot afford shutdowns due to mechanical failure in your pumping system. Switch to Ingersoll-Rand MOTORPUMPS for more dependability.

MOTORPUMPS mount in any position and require no special foundation. Select the right units for your job from the most complete line of space-saving centrifugal pumps manufactured. Write for our new Bulletin on this line from ¼ through 75 horsepower . . . capacities to 2800 gallons per minute . . . heads to 650 feet. Prompt shipment from either factory or branch stock.

We can help you with any size pumping problem with units to 4000 horsepower.



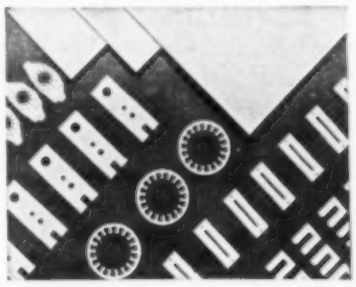
Ingersoll-Rand
9-160 11 Broadway, New York 4, N. Y.
For more details circle NED-803 E5 on enclosed inquiry slip

ORIGINAL
BOWES
COUPLINGS
• POSITIVELY LOCKED
• INSTANTLY CONNECTED

UNITED STATES AIR COMPRESSOR COMPANY
5300 Harvard Avenue Cleveland 5, Ohio
For more details circle NED-804 E5 on enclosed inquiry slip

New Processes & Materials

LAMINATED PLASTICS
thermosetting type developed for temperature-humidity conditions



Developed for design problems involving moisture, three grades of thermosetting laminated plastics show promise in electronic and precision instrument applications. Grades are coded according to filler material and utilize a DAP (diallyl-phthylate) resin base. Impregnated canvas grade C-104 is easily machined and has high degree of dimensional stability. Orlon grade O-104 is outstanding in that the power factor and dielectric constant show little change after NEMA water immersion tests. Woven glass cloth grade G-104 possesses the best electrical properties in dry conditions, but shows somewhat higher rate of change when subjected to moisture.

Respectively, these DAP grades will withstand continuous temperatures of 275°, 225° and 325° F without effect on mechanical or electrical values. Laminates are offered in sheet and tube form or as fabricated parts. Canvas and Orlon sheets range from 1/32 to 1 in. thick, while glass fabric grade is available in sheets 1/64 to 1 in. thick. Made by **Synthane Corp.**, N.E. River Rd., Oaks, Pa.

For more details circle NED-805 E5 on enclosed inquiry slip

THERMO-SETTING PLASTIC COATING
resists all known solvents

Applied like paint, Glascote thermo-setting plastic bakes itself into a smooth, hard, waterproof surface which resists all known solvents. Developed during World War II to keep U.S. Navy craft from leaking and rotting, this "liquid tile" is practical for walls, floors and concrete tank linings subject to attack by acids, caustics, salt water, alcohol and grease. It can be applied with brush, spray, roller or swab to plaster, sheet rock, concrete, brick, Masonite, seasoned wood and fiberboard. It sinks into and becomes part of the surface. Hardener mixed into it generates low, safe heat which literally bakes Glascote into a tile-hard finish. A gallon covers 300 to 400 sq ft. Sand or aluminum oxide sprinkled on the wet finish sinks in and produces a nonskid surface. It can be applied over water-mix paints only and will not discolor or fade. Tensile, flexing and compression strengths are 3, 6 and 10 tons per sq in., respectively. Made by **Ev-R-Shield Products, Inc.**, Dept. 35N, Joppa, Md.

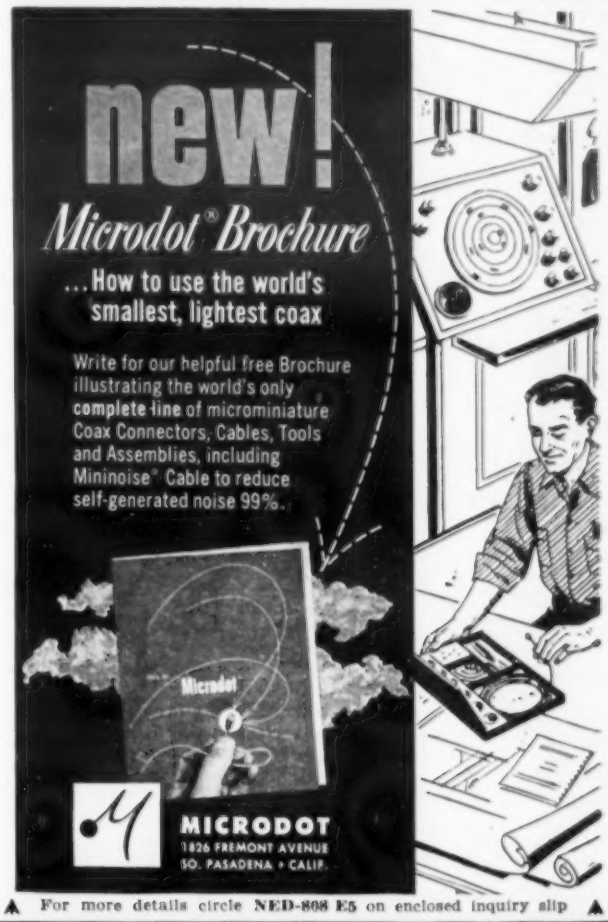
For more details circle NED-806 E5 on enclosed inquiry slip

INSULATING WALL MATERIAL
made of cellular glass, has ¾-in. white ceramic finish

An impact-resisting surface with high insulating and moistureproof qualities is provided by Duraface Foamglas, a cellular glass material offered in block form. With these blocks, a wall completely insulated and surface-finished can be erected in one operation. Being made of glass, material will not deteriorate or burn, will resist nearly all chemicals and will serve as a rigid barrier to rodents and other vermin. Where cleanliness is essential, the white ceramic surface can be easily washed down.

Blocks measure 18 x 12 in. and can be 2, 3 or 4 in. thick depending upon amount of insulation required. They are installed with straight or staggered joints. Hot asphalt or cold adhesive can be used. Photo shows powdered chemical and pulverized glass mixtures from which blocks are made. The two batches are baked together to produce the finished block with a hard dense surface. Made by **Pittsburgh Corning Corp.**, Dept. 12-NED, 1 Gateway Center, Pittsburgh 22, Pa.

For more details circle NED-807 E5 on enclosed inquiry slip



For more details circle NED-808 E5 on enclosed inquiry slip

25% FASTER WELDING
than with comparable electrodes of the
NEXT LARGER SIZE!

A. Length (12.3") of ¼" fillet weld deposited by 3/16" Sureweld "24" electrode in one minute.

B. Length (9.8") of ¼" fillet weld deposited by the next larger size E-6012 electrode in one minute.

NEW SUREWELD®
IRON POWDER ELECTRODES

If you do production welding of lap, fillet or flat-bevelled joints, the new *Sureweld* iron powder electrodes can boost your production and cut your welding costs.

Increased speeds of 25% are obtainable even when compared with the next larger diameter of E-6012 or E-6020. For example, you can use 3/16" *Sureweld* iron powder electrode where you now use 1/4" electrode, or 5/32" *Sureweld* instead of 3/16" electrode.

And faster welding is only half the story. Not only do *Sureweld* iron powder electrodes cost less to use, but they produce *better welds* with higher impact values, greater crack resistance and deeper penetration. The "contact welding" technique makes them easier to use while their very low spatter and easily removed slag cut clean-up time.

There's a descriptive bulletin that gives all the facts and figures on these amazing electrodes. Write for yours today.

Copyright 1955, National Cylinder Gas Company

NCG®
NATIONAL CYLINDER GAS COMPANY
840 N. MICHIGAN AVENUE • CHICAGO 11, ILLINOIS
Branches and Dealers from Coast to Coast
For more details circle NED-809 E5 on enclosed inquiry slip

BROOK MOTORS

HAVE TURNED THE WHEELS OF INDUSTRY NIGHT AND DAY SINCE 1904

BROOK MOTOR CORPORATION

BROOK MOTORS WILL MORE THAN MEET YOUR REQUIREMENTS

. . . because they are designed for continuous operation in extreme temperatures or unfavorable conditions. Equal or better than NEMA specifications. Cost no more than standard motors—often less. Try a Brook on your next replacement. Splash-proof, totally enclosed non-ventilated, totally enclosed fan cooled, single-phase, open drip-proof, and pump motors. Send for Catalog.

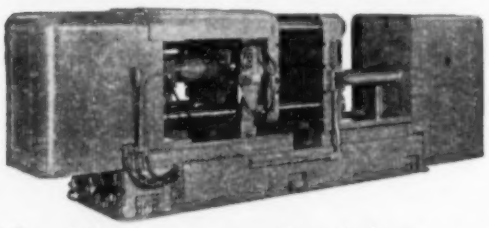
BROOK MOTOR CORPORATION
3551 W. PETERSON AVE., CHICAGO 45, ILL.

Fast delivery of all popular models. Brook motors are available from warehouses at Chicago, Jacksonville, Fla., Jersey City, N. J., Houston, Los Angeles, San Francisco, Seattle, Savannah, Ga., and other major distributing points.

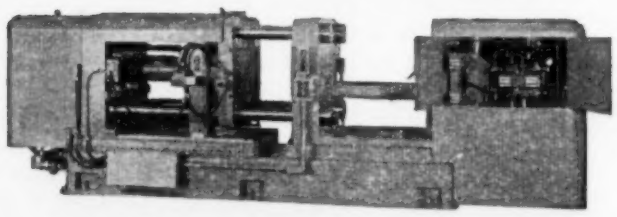
▲ For more details circle **NED-812 E5** on enclosed inquiry slip ▲

This catalog tells you how

the LEWIS 650-B



with the revolutionary Hydra-Lock® Clamp produces these precision die-castings faster... more economically



This versatile die-forge casting machine will mass produce pressure-tight aluminum and magnesium alloy parts with minimum scrap. Combination of the exclusive new 650-ton "Hydra-Lock" clamping mechanism and a high-speed 100,000-pound injection system assures top quality precision and maximum safety. Complete details and specifications on Model 650-B are presented in the illustrated bulletin. Read the facts for yourself.

LEWIS Write today for Bulletin 103

THE LEWIS WELDING & ENGINEERING CORPORATION

14 Interstate Street, Bedford, Ohio 6127-LW

▲ For more details circle **NED-813 E5** on enclosed inquiry slip ▲

New Literature & Catalogs

Rotating Mechanical Seal

Durametallic Corp.—General types and styles of Dura mechanical seals covered in 12-page illustrated catalog 455 are designed to meet the sealing requirements of centrifugal and rotary pumps, autoclaves, agitators, blowers and similar rotating equipment. Seals, which rotate with the shaft in either direction, are applicable to standard stuffing boxes. Models outlined are usable at temperatures from −150 to 550° F, pressures from 28 in. vacuum to 1000 psi and with wide variety of fluids.

▲ For more details circle **NED-814 E5** on enclosed inquiry slip ▲

Refrigeration Parts, Motors, Etc.

Harry Alter Co.—1955 Dependabook No. 162 contains data on over 10,000 items, including refrigeration, air conditioning and electric motors, parts and supplies. Catalog contains illustrations, prices and descriptions of all items.

▲ For more details circle **NED-815 E5** on enclosed inquiry slip ▲

Pipe Couplings & Fittings

Victaulic Co. of America—36-page catalog-manual entitled "The Victaulic Method of Piping" presents latest information on line of pipe couplings, fittings and pipe grooving tools for use with steel, wrought iron, spiral, aluminum, plastic and other types of pipe. New styles shown include Snap-Joint which is assembled or disassembled without tools and the Roust-A-Bout coupling which joins plain end pipe with "bull-dog" grip.

▲ For more details circle **NED-816 E5** on enclosed inquiry slip ▲

Instrument Transformers

General Electric Co.—Basic up-to-date information on the complete line of G-E instrument transformers is contained in the 100-page 1955 Buyer's Guide, designated as GEC-1028. Ratings, ASA accuracy classifications and prices for all standard indoor and outdoor potential and current transformers are given. Listings of tests and mechanical and thermal data also are presented.

▲ For more details circle **NED-817 E5** on enclosed inquiry slip ▲

Standard Gear Sets

Foote Bros. Gear & Machine Corp.—Standard gear sets described in illustrated, plastic-bound engineering manual of 30 pages are listed by center distances and capacities to facilitate selection for specific applications. Duti-Rated Lifetime gearing covered has its specifications detailed. Material on selection is included and space-saving gear arrangements are shown.

▲ For more details circle **NED-818 E5** on enclosed inquiry slip ▲

Air Power System

Ingersoll-Rand Co.—Power losses in compressed air lines are frequently as much as 30 to 50 per cent, according to 6-page illustrated engineering service bulletin 213-A, "A Better Air Power System." It describes how to find where air is being wasted. Aid in designing new systems and diagrams of different piping network types are included, along with friction-loss tables.

▲ For more details circle **NED-819 E5** on enclosed inquiry slip ▲

Research Facilities

Cook Electric Co., Cook Research Laboratories Div.—Organizational setup and facilities for basic, applied research and development in various fields are detailed in 72 pages of illustrated brochure R-14. Included are descriptions of work conducted in fields of servomechanisms, nuclear physics, radar, sonar, guided missiles, electronic instrumentation and human engineering.

▲ For more details circle **NED-820 E5** on enclosed inquiry slip ▲

Packaged Water Tube Boiler

International Boiler Works Co.—Line of packaged firebox type water tube boilers for high and low pressure requirements are subject of 8-page catalog. Features of the Compak units are presented in individual sections. Units are built in accordance with ASME code, national board and other requirements.

▲ For more details circle **NED-821 E5** on enclosed inquiry slip ▲

Commemorative & Award Tablets

International Bronze Tablet Co.—48-page illustrated catalog is descriptive of complete line of honor rolls, war memorials, testimonial plaques, safety and industrial awards and cast bronze nameplates. Standard and specially designed types are offered.

▲ For more details circle **NED-822 E5** on enclosed inquiry slip ▲

LABORATORY or SHOP FURNACE

- Complete "Package"
- Ready-to-use
- Space-saving

PERECO *Electric* **FURNACES**

Model CB-55

2500° F. for normal use (up to 2750° F. maximum)

Here's a series of Pereco Electric Furnaces that constantly grows in popularity. The CB-55 (illustrated) is suited to a wide range of temperatures for tasks requiring close control and great flexibility for efficient handling of most heat treating requirements in the laboratory or shop.

Ready to use after simple connection to power source. Chamber 12" d. x 8¾" w. x 6" h. Silicon carbide elements. All controls on front panel; automatic temperature indicator-controller; current input meter; 36-tap auto-transformer with switch interlock; circuit breaker safety cut-off switch; and warning pilot-light. 230-v., 60-cyc., 1 or 3 ph. AC, with variable control from 3.5 to max. 11 kw.

PERENY EQUIPMENT COLUMBUS OHIO

Write Today For Full Details

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Export Office: Bessemer Bldg., Pittsburgh 22, Pa.

▲ For more details circle **NED-823 E5** on enclosed inquiry slip ▲

PAYS FOR ITSELF QUICKLY IN LABOR SAVING

SABIN *One-Man* **BARREL TRUCK**

LOOK AROUND! How many of your employees are used to handle heavily loaded barrels and drums? You can reduce the number to ONE and save plenty by using a Sabin Barrel Truck.

OPERATION IS EASY—you run truck up to container, hook on at top and pull back on handle to pick up load. *Third Wheel Feature* assures better balance and added safety.

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Ave., Cleveland 3, Ohio

▲ For more details circle **NED-824 E5** on enclosed inquiry slip ▲

"UNI-TIE" *with* **STANLEY** ® **STEEL STRAPPING**

A COMPLETE LINE OF Power AND HAND TOOLS FOR PRODUCTION LINE STRAPPING, SKID STRAPPING AND CAR BANDING —— Write for free folder ("Uni-tie Your Products") and catalog (Form SS-9C).

STANLEY INSURE IT – SECURE IT WITH STANLEY STEEL STRAPPING

STEEL STRAPPING DIVISION
THE STANLEY WORKS, 585-S LAKE ST., NEW BRITAIN, CONN.
Telephone: BAldwin 9-2021
STANLEY TOOLS • STANLEY HARDWARE • STANLEY ELECTRIC TOOLS
STANLEY STEEL STRAPPING • STANLEY STEEL

▲ For more details circle **NED-825 E5** on enclosed inquiry slip ▲

EVERY ENGINEER

will want a copy of this new BULLETIN

It's easy to get the right answer for even your most special *flexible piping jobs* when you use this new engineering catalog on BARCO SWIVEL JOINTS. It is complete with pictures and diagrams showing correct application and contains all specification data for *improved* Barco Swivel Joints:

- Leakproof! Perfect Sealing—Hot or Cold.
- No Binding, Low Torque! Trouble-free.
- Self-Aligning! Simplifies Installation.

Send for a copy of new Catalog No. 265A and complete information. BARCO MANUFACTURING CO., 530F Hough St., Barrington, Illinois.

BARCO LEAKPROOF SWIVEL JOINTS

For more details circle NED-826 E5 on enclosed inquiry slip

DICO Light Duty Industrial wheels . . . made with the same quality and precision as the DICO "proven quality" Heavy Duty line. For light industrial equipment. Semi-pneumatic tired and Molded Solid Rubber in popular sizes.

A Complete Line of LIGHT DUTY, MEDIUM DUTY and HEAVY DUTY INDUSTRIAL WHEELS

- PNEUMATICS
- SEMI-PNEUMATICS
- MOLDED ON

Write for Complete New Wheel Catalog

DICO DES MOINES 5, IOWA

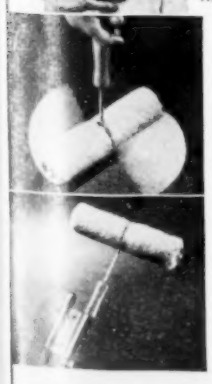
For more details circle NED-827 E5 on enclosed inquiry slip

New 2-Headed Roller

cuts plant painting time 52%

BESTT DUO-MECHANIC *Industrial Rollers* designed for PROFESSIONAL PAINTERS

New Twin head roller furnished in four sizes!



Exclusive T construction provides perfect balance—cuts fatigue differential action eliminates skid marks. Ideal for fences—concrete—plaster—dry wall construction.

Your order will be shipped through your nearest BESTT DISTRIBUTOR

All covers are 12/16" Lambskin

8"—No. 800	$4.89
11"—No. 1100	5.40
14"—No. 1400	6.09
18"—No. 1800	6.82

Also available in heavy duty model with Hardwood Cores.

Replacement covers available in 7/16"—12/16"—16/16" Lambskin and 7/16"—12/16" Dynel.

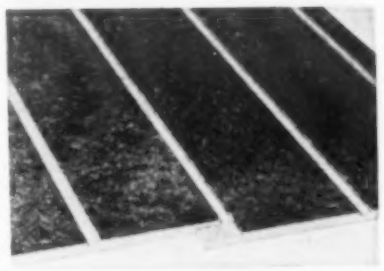
DEPT. I

BESTT ROLLR INC. P. O. BOX 551, FOND DU LAC, WIS.

For more details circle NED-828 E5 on enclosed inquiry slip

New Processes & Materials

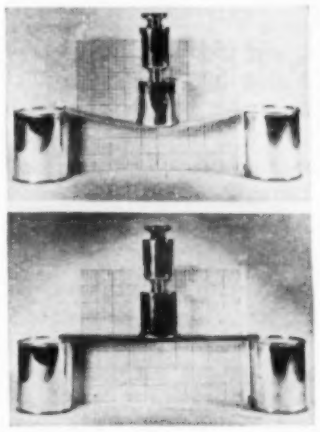
PRESSED WOOD PANELING
grooves give look of vertical board



Grooves 3/8-in. wide and 1/10-in. deep, and spaced on 4-in. centers give this 5/16 - in. Panel groove tempered Presdwood the appearance of vertical board construction. It has a ship lap joint treatment. Overlap on one edge is 3/4-in. and underlap on opposite edge is 1 1/8 in. Shiplap edge, therefore, forms the groove at the joint. Paneling is available in 4 x 8-ft panels or any combination of lengths that can be cut from a 16-ft panel. It can be nailed directly to studs, or over sheathing. Made by **Masonite Corp.**, Suite 2039-N, 111 W. Washington St., Chicago 2, Ill.

For more details circle NED-829 E5 on enclosed inquiry slip

LIGHTWEIGHT CELLULAR PLASTIC
for reinforcing or insulating uses, can be sawed and machined like wood



Unusual light weight of syntactic foam, a cellular wood-like plastic material, enables it to be used to reinforce plastic structures as a low density sandwich core that adds stiffness without sacrificing strength. Applications include reinforcing boat hulls and aircraft wings as well as insulation for air conditioners and refrigerators. Foam is made by bonding nitrogen-filled phenolic spheres with phenolic, polyester or epoxy resins.

Sandwich core structures have flexural strengths ranging from 1700 to 4500 psi and compressive strength as high as 12,100 psi. Different densities and strengths can be obtained during easily-controlled production. Top photo shows bend of 1-in. wide, 0.12-in. thick strip of polyester-glass reinforced fabric under 6 1/2-lb load compared to that of syntactic foam sandwich of equivalent weight. Foams ranging in density from 10 to 39 lb per cu ft are easy to prepare and can be drilled, sawed or machined like wood. Developed by **Bakelite Co.**, Dept. NE, 300 Madison Ave., New York 17, N. Y.

For more details circle NED-830 E5 on enclosed inquiry slip

CLEANER-DERUSTER
soluble in water or alcohol

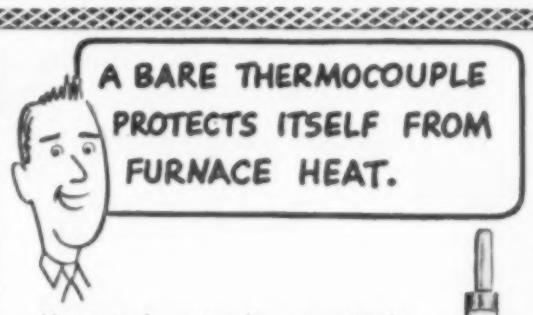
Light to moderate rust, heat scale, tarnish and other oxides, as well as normal shop dirt are removed by Oakite Compound No. 131, a nonviscous, amber-colored acid detergent liquid. It has a pH range of 1.5 to 1.0 at 70° F and a bulk density of 11 lb per gallon. Compound is completely and readily soluble in water or alcohol in all proportions. Rinsing can be in hot or cold water. Use is in concentration range of 5 to 30 per cent by volume. Recommended operating temperature range is from room temperature to 160° F. Made by **Oakite Products, Inc.**, 132G Rector St., New York 6, N. Y.

For more details circle NED-831 E5 on enclosed inquiry slip

SAFETY LOCK WIRE
wound on small disposable spools

Stainless steel safety lock wire is available in toolbox-size packages, wound on 1, 5 and 10-lb disposable spools. Minimum quantity offered in this package is 100 lb. Range of wire sizes is from 0.020 to 0.067-in. Wire is made to four different government specifications in stainless types 302, 304, 305 and 316. Made by **National Standard Co.**, Niles 17, Mich.

For more details circle NED-832 E5 on enclosed inquiry slip



A BARE THERMOCOUPLE PROTECTS ITSELF FROM FURNACE HEAT.

Not many thermocouples can survive the intense heat and corrosive atmospheres of a furnace. But T-E's tubular thermocouple can. The constantan element is surrounded (and protected) by a thick, tubular, iron element. The iron element is so rugged it acts as its own protection tube and can be used, frequently, without an additional protection tube. Result: high sensitivity. Calibrated to ISA accuracy standards; range up to 1800°F.

standard sizes

outside dia.	length
9/16"	18", 24", 36", 48", 60"*
13/32"	12", 18", 24"*
1/4"	6", 12", 24"*
1/8"	up to 30 ft. maximum

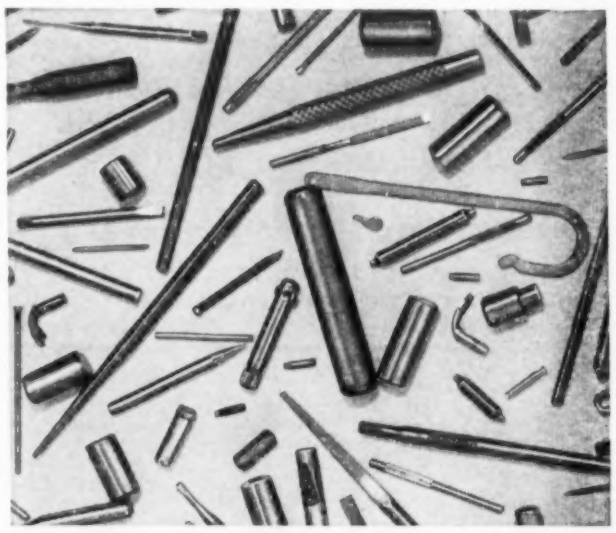
*Longer, if necessary.

Interested? Write for bulletin 22-T.

Thermo Electric Co., Inc.
SADDLE RIVER TOWNSHIP, Rochelle Park P.O., NEW JERSEY
CANADA • THERMO ELECTRIC (Canada) Ltd., BRAMPTON, ONT.

For more details circle NED-833 E5 on enclosed inquiry slip

TORRINGTON *delivers small precision parts promptly*



"On time" shipments of Torrington small precision metal parts will keep your production lines moving.

Special automatic machinery of our own design, plus almost 90 years of precision metalworking experience, enables us to produce your small precision parts *faster, better and for less* than you can make them yourself. And we follow your specifications *exactly* on tolerances, temper, hardness and finish.

Send a sample part or blueprint for our quotation. Our Condensed Catalog illustrates many of the parts we can produce for less. Ask for it.

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

For more details circle NED-834 E5 on enclosed inquiry slip

SOLVE "TOUGH" PARTS PROBLEMS

WITH Colonial's SILICONE RUBBER

There's practically no end to the usefulness of silicone rubber as a material for making rubber parts. It won't melt or harden at 500 deg. F., won't conduct electricity, is not affected by sun, water or weather, and even dry ice can't freeze it. These and many other desirable properties which can be obtained through Colonial's expert compounding, make silicone rubber the most likely material for solving your "tough" parts problems.

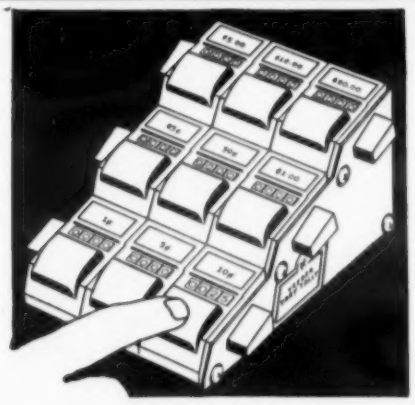
Whether you are designing new products, or improving existing ones, contact Colonial Rubber Company for details on the advantages of fabricating more efficiently and *profitably* with silicone rubber. Our service is complete . . . you can call on us for any one or all three of the following:

EXPERT COMPOUNDING
ACCURATE PRODUCTION
QUICK DELIVERY

1967

COLONIAL RUBBER CO.
RAVENNA, OHIO

For more details circle NED-835 E5 on enclosed inquiry slip



ANOTHER NEW VEEDER-ROOT "FIRST"

New *Vary-Tally* Multiple-Unit Reset Counter gives you quick finger-tip count of anything countable. Comes in any combination up to 6 banks high, and 12 units wide (also a new single unit model). Write for news sheet and prices.

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONNECTICUT
"The Name That Counts"

For more details circle NED-836 E5 on enclosed inquiry slip

How to check precision gears quickly, conclusively, to closest tolerances

With the Kodak Conju-Gage Gear Checker, you pass every right gear, reject every wrong gear—check tooth-to-tooth composite error of .0002".

The revolutionary Kodak Conju-Gage Worm Section, used with both spur and helical gears, provides a new standard of gage precision, combines accuracy with economy. Results are recorded automatically for permanent reference.

Write for a copy of the booklet, "Kodak Conju-Gage Gear Testing Principle," which shows how Conju-Gage Instrumentation can help solve your precision gear problems.

Special Products Sales Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak TRADE MARK

CONJU-GAGE INSTRUMENTATION

For more details circle NED-837 E5 on enclosed inquiry slip

New Literature & Catalogs

Standard Aluminum Shapes

Harvey Aluminum — 60-page illustrated manual "Standard Shapes" is designed to assist manufacturers, fabricators and engineers who use standard aluminum sections. Indexed for easy reference, book covers standard shapes such as angles, tees and channels; rod and bar; tube; architectural and molding; and trailer types. Available sizes, weights, properties and applications of shapes in all alloys are detailed.

For more details circle NED-838 E5 on enclosed inquiry slip

Rotary Sanitary Pumps

Viking Pump Co.—14-page illustrated catalog section F deals with line of sanitary pumps in rated capacities of 20, 35, 50 and 90 gpm at pressures to 50 psi. At reduced speeds, pumps will handle fluids with viscosities up to 10,000 S.S.U. Described are various types of drives including, geared, straight-line, belt, variable speed and integral. Pumps meet 3A sanitary specifications.

For more details circle NED-839 E5 on enclosed inquiry slip

Conveyor End Assemblies

Sandvik Steel, Inc., Sandvik Steel Belt Conveyors Div.—Packaged terminal end assemblies for steel belt conveyors are discussed and described in illustrated bulletin 201. These pre-engineered units are ready to operate as soon as they are mounted on a supporting framework. Spring, counterweight, pivoting weight and take-up bearing types of tension end units are offered.

For more details circle NED-840 E5 on enclosed inquiry slip

Self-Adhering Protective Masks

W. H. Brady Co.—Practical suggestions on how to save time and money in spray painting and other metal finishing where masking is needed are presented in 6-page illustrated folder 160-C. Case histories show uses of pre-cut adhesive masks. Actual testing samples of these pressure-sensitive masks are included.

For more details circle NED-841 E5 on enclosed inquiry slip

Ceramic Properties

American Lava Corp.—Technical data chart No. 51 contains complete mechanical and electrical properties of various grades of vitreous ceramic materials, lava and refractories. Selection charts are guide to loss factors, water absorption, hardness, thermal expansion and flexural strength.

For more details circle NED-842 E5 on enclosed inquiry slip

Industrial Power Trucks

Lewis-Shepard Products, Inc.—"Facts About Fork Trucks—The Gas vs. Electric Question" is title of folder which contains 12 data sheets and two industrial truck maintenance forms which enable the user to keep an accurate breakdown of labor, parts and power costs for both gasoline and electric industrial trucks. Fact sheets are digests of information published by several users and manufacturers of industrial power trucks.

For more details circle NED-843 E5 on enclosed inquiry slip

Oilers, Safety Cans & Oil Containers

Eagle Mfg. Co.—Complete line of oilers, safety cans and oil and gasoline containers is described and illustrated in general catalog No. 55. Equipment covered in the leatherette-bound catalog has a wide range of industrial uses.

For more details circle NED-844 E5 on enclosed inquiry slip

Measuring & Controlling Liquid Level

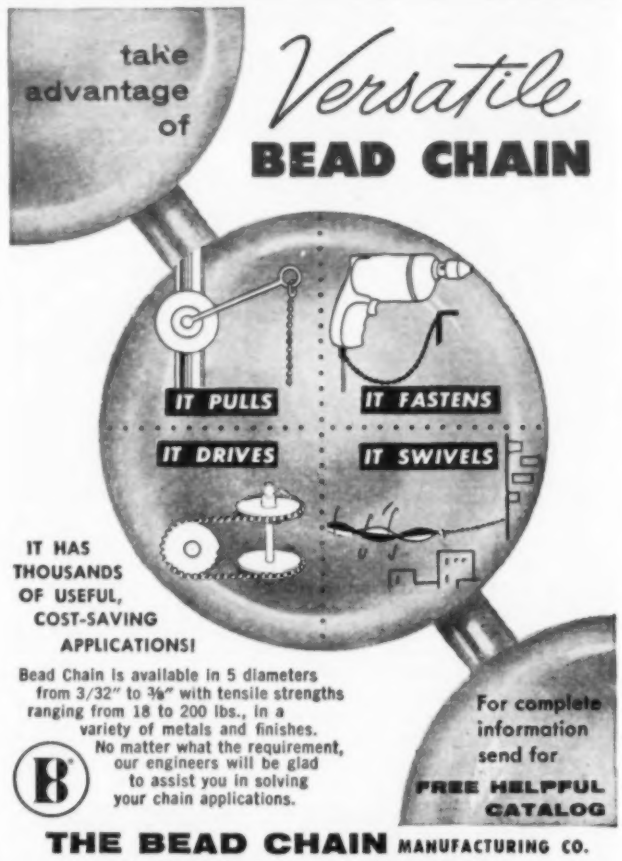
Minneapolis-Honeywell Regulator Co., Industrial Div.—Discussion of the basic principles of liquid level measurement, control and transmission is contained in the 20 pages of illustrated bulletin 1161. Systems are described in detail, along with applications, operating principles, limitations and advantages.

For more details circle NED-845 E5 on enclosed inquiry slip

Merchandise Handling Equipment

Brooks & Perkins, Inc.—File-size folder contains six illustrated catalog pages on standard models of MiniMax Pusharound merchandise handling equipment. Trucks are made of magnesium in sizes with capacities of 500 and 1200 lb. Basic sizes are 24 x 48, 24 x 60 and 30 x 60 in. Choice of casters and bumpers is offered.

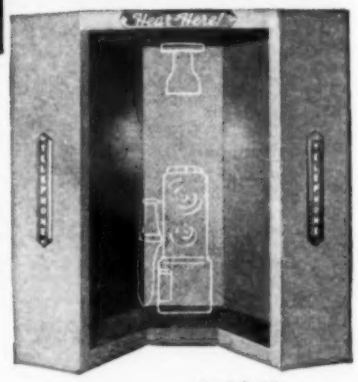
For more details circle NED-846 E5 on enclosed inquiry slip



THE BEAD CHAIN MANUFACTURING CO.
16 Mountain Grove St., Bridgeport, Conn.

For more details circle NED-847 E5 on enclosed inquiry slip

YOU CAN ALWAYS "Hear-Here"



You are actually out of this world in a Burgess-Manning "HEAR - HERE" Booth — you hear every word distinctly regardless of noise around you.

- Air always fresh
- No corners to sweep
- New triangular configuration permits 7 space-saving multi-booth arrangements.
- Sturdy, steel construction
- Beautiful silver-gray hammered finish
- Easily installed — no maintenance

Write for Bulletin A-131

Model 45
35½" wide, 32" deep, 36" high. Price $100.00 f.o.b. Chicago. Light fixture $9.00 extra. Auxiliary floor stand $85.00 extra.

Other Models Available

Architectural Products Division of
BURGESS-MANNING COMPANY
5968 Northwest Highway, Chicago 31, Illinois

Manufacturers of 3-Way Functional Ceilings and Telephone Acousti-Booths

For more details circle NED-848 E5 on enclosed inquiry slip

Here's How To BUILD EXTRA PUMPING SERVICE INTO EVERY PRODUCT with Invader PUMPS

STANDARD SERVICE PUMPS
Gear-within-gear rotary pump available in capacities of 5, 10, 18, 20, 30, 35, 50 and 100 gpm. Horizontal port may be on left or right side; also made with straight-through ports.

HAZARDOUS LIQUID PUMPS
Similar to standard models in appearance and construction. Can be furnished with any type of drive. Complete with relief valve. Listed under reexamination service of UL.

RUGGED DUTY PUMPS
For truck mounting and other installations where operating conditions are unusually severe. Tapped for pipe sizes 1½" to 2"; capacities 35, 50 and 100 gpm. Flange type for pipe size 2½" to 4"; capacities 100, 200 and 300 gpm.

L-P GAS SERVICE PUMP
Double mechanical seal to prevent leakage. Double row radial thrust bearing holds shaft in alignment. Double seal caps protect bearing against wear by keeping out dirt. Relief valve reversible for changing directions of rotation "O" rings used to assure tight fit . . .

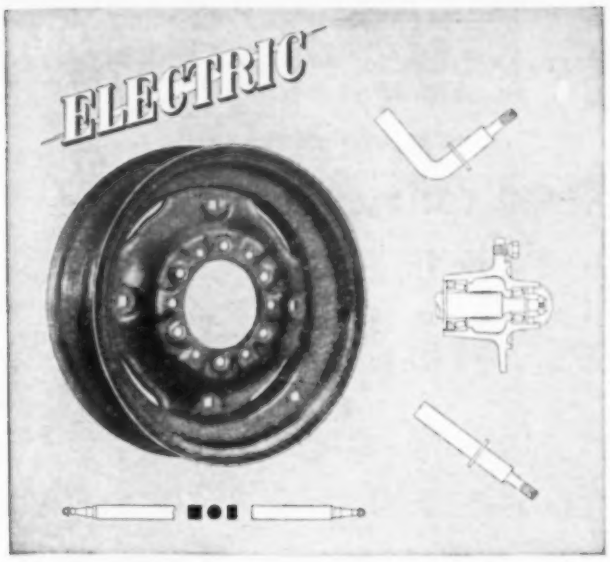
INVADER PUMPS PERFORM BETTER . . . LONGER

- These rotary pumps incorporate the positive seal of the gear-witin-a-gear principle with a new and improved rolling contact tooth design. Assures less "down-time", fewer replacements and reduced power costs. Self-priming . . . no pulsation . . . economical to operate Write today for catalog "Pumps For All Industries."

THE WAYNE PUMP COMPANY • Industrial Division
FORT WAYNE, INDIANA

Wayne Industrial Products

For more details circle NED-849 E5 on enclosed inquiry slip



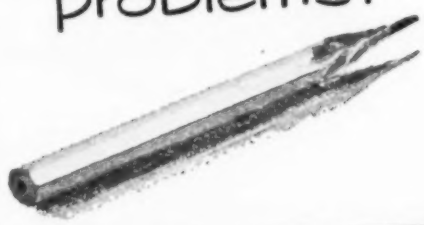
A Wheel for Every Job!

Our engineers will recommend the most efficient and economical wheel and axle assembly for your unit. We invite your inquiries.

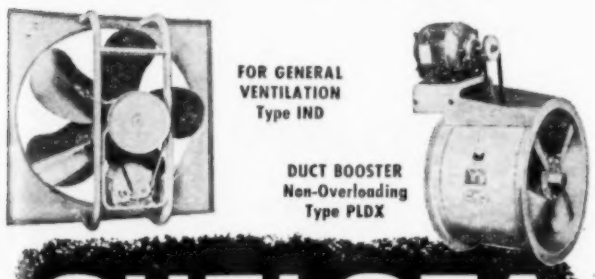
WRITE US FOR CATALOG
ELECTRIC WHEEL CO.
2802 SPRUCE, QUINCY, ILLINOIS

▲ For more details circle NED-850 E5 on enclosed inquiry slip ▲

CHELSEA will help solve ventilating and cooling problems!



Each new job presents different cooling and ventilating problems that we can successfully solve for you . . . Write us for complete data on the hundreds of possibilities offered in the wide range of styles, sizes and capacities of Chelsea Fans—ask for Data Sheets #600 or, for technical assistance, call our engineers.



CHELSEA FANS

Every Chelsea fan has a PFMA Certified Rating. Sturdy, all-steel construction for long and dependable service.

CHELSEA FAN & BLOWER CO., INC.
PLAINFIELD • NEW JERSEY
MANUFACTURERS OF INDUSTRIAL & HOME VENTILATING EQUIPMENT

▲ For more details circle NED-851 E5 on enclosed inquiry slip ▲

New Processes & Materials

NONSLIP FLOOR COATING
readily troweled over concrete

Safe nonskid surface is imparted to concrete floors in washrooms, around machine areas, in aisleways and on ramps and platforms by Ferrox plastic - abrasive. This coating is applied directly from can by troweling, and coverage is 40 sq ft per gal. Made by **American Abrasive Metals Co.**, 465 Coit St., Irvington, N. J.

▲ For more details circle NED-852 E5 on enclosed inquiry slip ▲

RUST-INHIBITIVE PIGMENT
for aluminum type protective paints

Rust - inhibitive aluminum pigment is now offered in paste form for inclusion into various aluminum protective paints. Paste is made up of powdered aluminum and strontium chromate, latter possessing outstanding rust-inhibiting properties, especially where salt water exposure is involved. Paint made from this product provides benefits of both rust-inhibitive primer and a reflective aluminum topcoat finish. Developed by **Reynolds Metals Co.**, 2552 S. Third St., Louisville 1, Ky.

▲ For more details circle NED-853 E5 on enclosed inquiry slip ▲

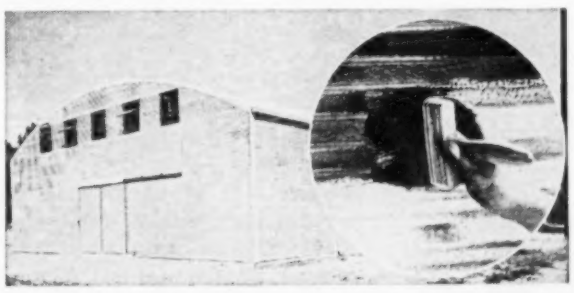
PACKAGING TAPE
reinforced with Fiberglas threads

Two 30-lb kraft sheets laminated with asphalt and reinforced bi-directionally with Fiberglas threads comprise Fastweld packaging tape. Fiberglas reinforcement gives tape high tensile strength and resistance to tear. Supple-ized process make tape pliable and easy to handle. Extra heavy coat of glue activates tape instantly, resulting in deep and permanent bond with carton surface. Made by **Hudson Pulp & Paper Corp.**, Dept. NE, 477 Madison Ave., New York, N. Y.

▲ For more details circle NED-854 E5 on enclosed inquiry slip ▲

GALVANIZED METAL COATING
applied without etching of surface

New or old galvanized metal surface can be coated without etching treatment with Galvinoleum. Galvanized gutters, ducts, roofs and buildings can be



protected right from the start without letting them "weather" for bonding purposes. Only grease, oil, dirt and loose rust need be removed from surface before applying coating. Product can be applied with brush, or sprayed on after required thinning. Red and green-colored coating will dry to touch in 4 to 8 hours, while metallic and gray will dry in 8 to 12 hours. Developed by **Rust-Oleum Corp.**, 2799 Oakton St., Evanston, Ill.

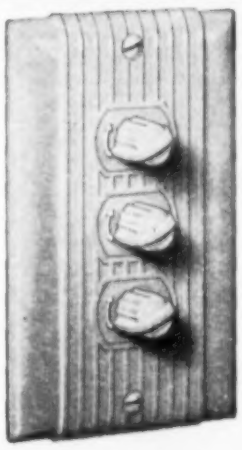
▲ For more details circle NED-855 E5 on enclosed inquiry slip ▲

Just use USS GERRARD Steel Strapping. Send for your FREE copy of USS GERRARD'S new 36-page Blue Book of Packaging, today.

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
4717 S. Richmond St., Chicago 32, Ill.

USS GERRARD
ROUND STEEL **STRAPPING** FLAT STEEL
UNITED STATES STEEL

▲ For more details circle NED-856 E5 on enclosed inquiry slip ▲



- It's a ROTO switch!
- It's a LUMINOUS switch!
- It's a QUIET switch

that handles:

FLUORESCENT LOADS
INDUCTIVE LOADS
INCANDESCENT LAMP LOADS
MOTOR LOADS

NEW **ROTO-GLO** Trade Mark
Quiet Switch
—because switches should be SEEN . . . not heard

New bulletin tells all — write Dept. 415 for it today.

PASS & SEYMOUR, INC.
SYRACUSE 9, N.Y. 4.15
OFFICES: 71 Murray St., New York 7, New York; 1229 W. Washington Boulevard, Chicago 7, Illinois.

▲ For more details circle NED-857 E5 on enclosed inquiry slip ▲

THIS KEYWAY BROACH KIT

Pays For Itself In No Time!

With du Mont *Minute Man* Kits like this you can cut any size keyway from 1/16" to 1" in any bore from 1/4" to 3" in one minute for as little as *one cent per keyway.*

BROACH SQUARE HOLES, TOO!

Minute Man High Speed Square Broaches for 3/16" to 3/4" squares finish cast or drilled holes much more accurately and far cheaper than by hand. Ideal for boring bars, milling cutters and a raft of applications.

The du MONT CORPORATION, Greenfield, Mass.

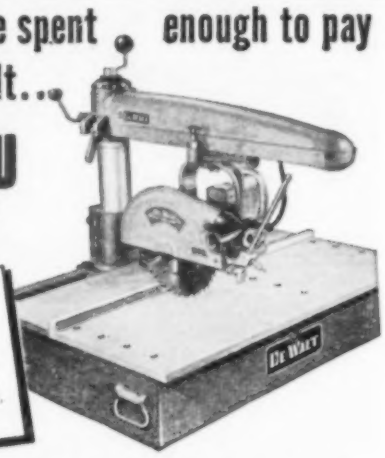
MAIL FREE BROACH CATALOG AND PRICE LIST D describing 25 standard kits, 23 standard broach sizes, 71 bushing sizes, square broaches and a wide range of SPECIAL BROACHES to

Name.....
Company.....
Address.....

▲ For more details circle NED-858 E5 on enclosed inquiry slip ▲

You may have spent enough to pay for an AMF DeWalt...

BUT DO YOU OWN ONE?



New model GW-I 10" Saw with FULL 1½ H.P. Motor . . . complete for only $395 DELIVERED (custom-built 1½ H.P. Motor, 10" saw blade, 4 detachable steel legs included)

Even if you've invested as little as $239 in shop equipment you may not be enjoying the benefits of a DeWalt®. One low-cost AMF DeWalt...

- Does ALL the work of a swing saw, straight line cut-off and miter saw, table-type rip saw, dado machine, shaper plus many others.
- Saves you up to 60% in capital equipment investment.
- Saves you up to 75% in floor space.

These and many other AMF DeWalt advantages are explained fully in our *free* new idea book for industry. SEND FOR IT TODAY! Write AMF DeWalt, Dept. NED-5, Lancaster, Pa.

FREE! Send for new idea book on industry!

Another AMF Product DEWALT POWER TOOLS

▲ For more details circle NED-861 E5 on enclosed inquiry slip ▲

TRANSPORTS AND PILES THEM HIGH

Large loads are handled speedily and without concern for aisle clearance or floor conditions with this motor-driven tote box grab and Cleveland Tramrail overhead rail system. Boxes are picked up, delivered and stacked by the cab operator, alone, with controls in the cab.

GET THIS BOOK! BOOK No. 2008 Packed with valuable information . . .

CLEVELAND TRAMRAIL ENGINEERING AND APPLICATION DATA BOOK 2008

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6623 East 285th St., Wickliffe, Ohio

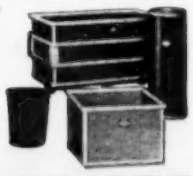
CLEVELAND TRAMRAIL

▲ For more details circle NED-862 E5 on enclosed inquiry slip ▲

SIMPLIFY YOUR MATERIALS HANDLING

SEND FOR FREE CATALOG OF FIBRE CONTAINERS

Spaulding Fibre Receptacles make storage and handling easier. They're tough, lightweight, shock-proof, resistant to impact and abrasion, will not splinter or corrode. Boxes, barrels, trays and trucks of all sizes, types and weights. Mail coupon today.



Spaulding

SPAULDING FIBRE COMPANY, INC., Dover, N. H.

Please send me your catalog on Spaulding's complete line of Fibre receptacles.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

▲ For more details circle NED-863 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

Tubing Steel Analyses

Babcock & Wilcox Co., Tubular Products Div.—Chemical analyses of standard carbon, alloy and stainless tubing steel used for elevated temperature and/or pressure service are included in 4-page folder TDC 177. It is cross indexed to associate grade and ASTM specifications for individual tubing steels involved.

▲ For more details circle **NED-864 E5** on enclosed inquiry slip ▲

Electric Tachometer

Electric Tachometer Corp.—Accurate, instantaneous speed indication for large industrial machinery, conveyor lines and other installations is provided by model 40 heavy duty electric tachometer, described in illustrated 16-page bulletin 531. Direct current instrument has vertical or horizontal drive by worm or spur gear, pulley, chain and sprocket or flexible coupling for speeds up to 30,000 rpm.

▲ For more details circle **NED-865 E5** on enclosed inquiry slip ▲

Uniform Plumbing Code

Uniform Code for Plumbing, said to be the country's first national plumbing standard, is designed to modernize existing practices and to co-ordinate work of plumbing equipment manufacturers, architects, contractors, municipal law makers, building officials and others. It was developed jointly by the ASA and ASME. "American Standard National Plumbing Code" of 186 pages is available for $3.50 from American Standards Association, 70 E. 45th St., New York 17, N. Y.

▲ For more details circle **NED-866 E5** on enclosed inquiry slip ▲

Electromechanical Products

Transitron, Inc.—Facilities for design and production of precise electromechanical and electronic products are described in 20-page illustrated booklet. Production facilities illustrated include machining, electronic and mechanical production, group management, silver soldering, model making, testing and tropicallizing.

▲ For more details circle **NED-867 E5** on enclosed inquiry slip ▲

Trimming Equipment

Steel Products Engineering Co.—Brehm trimming equipment, subject of 12-page illustrated brochure BC-1, can be used for flat edge trimming, notching and cutting tabs with one press stroke. It can be adapted to a variety of stampings by using interchangeable cutting adapters. Ferrous, nonferrous and nonmetallic materials can be trimmed. Operational details and production examples are covered.

▲ For more details circle **NED-868 E5** on enclosed inquiry slip ▲

Lift Truck

West Bend Equipment Corp.—Several new designs in hydraulic and mechanical lift trucks are featured in the Weld-Bilt lift truck catalog. In addition to the standard Weld-Bilt truck and skid line, it covers spring-suspended hydraulic lift trucks, Pal-Boy single-stroke pallet trucks, Lo-Boy single-stroke mechanical lift trucks, hydraulic lift tables and skid adapters.

▲ For more details circle **NED-869 E5** on enclosed inquiry slip ▲

Drain Channel Pipe

Logan Clay Products Co.—Highly corrosive industrial wastes can be handled and disposed of through Chemi-Drain channel pipe, a vitrified clay product that is chemically inert to virtually every known industrial corrosive. Described in 4-page illustrated bulletin LC-1154-68, it can be used at drain depths from 4 through 12 in. Matching tile curbing is also described.

▲ For more details circle **NED-870 E5** on enclosed inquiry slip ▲

Personal Protective Equipment

General Scientific Equipment Co.—"Everything in Safety" is title of 1955 catalog of personal protective equipment and industrial safety devices. It covers respiratory devices, eye protection, hats, gloves, carboy pumps, drum pumps and miscellaneous industrial safety equipment.

▲ For more details circle **NED-871 E5** on enclosed inquiry slip ▲

Cooling Tower Pumps & Piping

Bell & Gossett Co.—Revised 8-page manual GR-155 is six-step guide for sizing cooling tower pumps and piping. Companion selection chart and list price sheet CSP-155 give full data on centrifugal pumps for cooling tower service.

▲ For more details circle **NED-872 E5** on enclosed inquiry slip ▲

NEW "HI-LO"

(HIGH VOLUME • LOW PRESSURE)

SPEED COUPLERS and CONNECTORS

"HI-LO" for highest air volume, lowest pressure drop.

Better efficiency, lower operating costs for all air-operated devices.

Wide selection of sizes for greater range of uses.

Write for bulletin No. 5518T.

THE ARO EQUIPMENT CORPORATION
Bryan and Cleveland, Ohio
Aro Equipment of California, Los Angeles, Calif.
Aro Equipment of Canada, Ltd., Toronto 15, Ontario.
Offices in All Principal Cities

ARO® SPEED COUPLERS

Also Air Tools . . . Air Hoists . . . Lubricating Equipment...Aircraft Products...Grease Fittings

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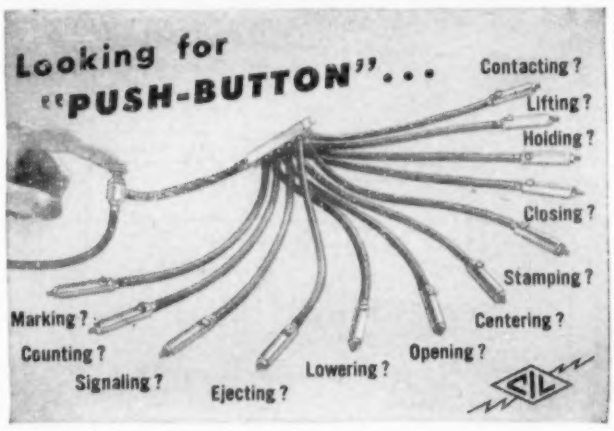


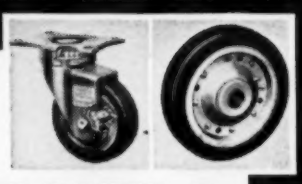
Clippard Miniature Air Cylinders, Valves, Accessories, MAY BE THE ANSWER!

Miniature spring-return cylinder, 2-3/16" x 7/16", and air valve, 1-3/16" x 5/8" overall, operate on 12 to 100 psi, up to 800 cycles per minute! Incorporate them into that automatic, or semi-automatic work set-up you are now considering to speed production. Accessories include complete line of miniature fittings, hose, manifolds, brackets and cam follower head. Illustrated literature, power and static data, dimensional drawings and price list free on request by writing:

Clippard INSTRUMENT LABORATORY, INC.
7390 Colerain Road, Cincinnati 31, Ohio
Manufacturers of R. F. Coils, Electronic Equipment, Miniature Pneumatic Devices

▲ For more details circle NED-874 E5 on enclosed inquiry slip ▲

More than 4000 Models



DARNELL CASTERS & WHEELS

RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads, make Darnell Casters and Wheels highly adapted to rough usage.

RUST-PROOFED . . . by the Udylite process. Darnell Casters give longer, care-free life wherever water, steam and corroding chemicals are freely used.

STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water. Zerk fittings are provided for quick grease-gun lubrication.

SEND FOR FREE MANUAL

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

• Save Money, Floors, Equipment and Time

▲ For more details circle NED-875 E5 on enclosed inquiry slip ▲

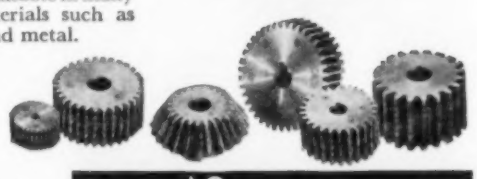
C/R GEARS

RAWHIDE

C/R rawhide transmits high efficiency power, absorbs severe shock loads, saves machinery . . . has an outstanding performance record.

NYLON and TEFLON

They're quiet, have high resistance to fatigue. Special purpose gears and pinions available in many other materials such as Fabroil and metal.



Write today for descriptive literature.

CHICAGO Rawhide MFG. CO.
1301 Elston Ave., Chicago 22, Ill.
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

▲ For more details circle NED-876 E5 on enclosed inquiry slip ▲

USSSCO's **new** *all Plastic* **SAF-I-SPEC**

2 sizes Large or Small for men and women

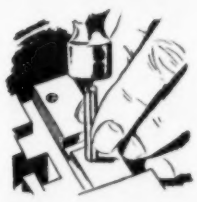
new styling assures wearer acceptance
new design Acetate frames provide greater strength
new light-weight for comfort (new SAF-I-SPECS weigh less than one ounce)
new colors in charcoal and burgundy

Ophthalmic type temples . . . strong rugged brow-bar . nickel steel hinges . . . velvet soft nose piece . . . lens locks in place securely easily removed without tools . . . meets Federal specifications.

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-877 E5 on enclosed inquiry slip ▲

Just drill and drive



SEL-LOK SPRING PINS

Drill a hole. Drive a SEL-LOK. These slotted tubular pins lock by spring action. They eliminate costly tapping, reaming, peening or milling operations. They eliminate the losses associated with close tolerances. A full range of diameters and lengths from $\frac{1}{16}'' \times \frac{3}{16}''$ to $\frac{1}{2}'' \times 4\frac{1}{2}''$ is stocked by industrial distributors. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

SEL-LOK SPRING PIN DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-878 E5 on enclosed inquiry slip ▲

New Processes & Materials

RUST INHIBITING COATING available in self-spray container

Originally introduced for brush or spray application (*NED—Jan.* '52), Totrust Instant Dry metal coating is now available in aerosol spray type container. Easily applied to any surface, coating penetrates and stops rust. It dries in less than 5 minutes to form a durable protective coating either as a one-coat primer or as a rust preventive undercoat. It can be applied to rusted or damp metal surfaces. Colors are red, zinc chromate, wrought iron black and stainless steel. Made by **Wilbur & Williams Co.**, 129 Lincoln St., Boston 35, Mass.

▲ For more details circle NED-879 E5 on enclosed inquiry slip ▲

PLASTIC COVE SEALER waterproofs cracks and corners

Cracks in industrial shower stalls and around washroom sinks as well as other cracks are sealed water-tight with Trim-Seal. This packaged kit contains 15 ft of flexible gloss white plastic strip, a bottle of waterproof adhesive that bonds strip to porous and nonporous surfaces and a brush for application. Sealed joint withstands steam, water and soap or detergents. Made by **Keller Products Co.**, 3099 Vine Ct., Cleveland 13, O.

▲ For more details circle NED-880 E5 on enclosed inquiry slip ▲

PROTECTIVE COATING of vinyl, builds to 10-mil coat

Heavy film thickness combined with chemical and moisture resistance of vinyl is possible with Amercoat mastic protective coating. It can be applied to a thickness of 10 mils in one double-pass spray coat. It adheres to edges and sharp corners to afford protection to these areas which are susceptible to corrosive attack. Applicable to metal, coating is moisture, acid, alkali and solvent resistant. It affords protection from abrasion, temperatures to 150° F and weather, and it is good electrical insulator and will not support combustion. Made by **Amercoat Corp.**, Dept. ND, 4809 Firestone Blvd., South Gate, Calif.

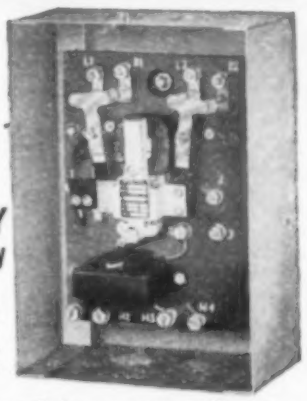
▲ For more details circle NED-881 E5 on enclosed inquiry slip ▲

INDUSTRIAL WHITE INK removable, yet will not rub off

Vaporite industrial white ink will mark in white on dark, flexible or highly polished surfaces, leaving a mark that will not flake or rub off. It is resistant to coolants, yet can be removed when desired with furnished solvents. Uses include marking fabricated parts during inspection or machining, stock numbering, circling defective holes and rivets, inventory and bin marking and wiring diagrams. Ink writes on and adheres to rubber, polished aluminum, glass, rough castings, painted, varnished or lacquered surfaces, copper and iron. Application is with the Jiffy-Rite felt-nib fountain pen. Made by **Time Saving Specialties**, 2818 Dupont Ave. S., Minneapolis 8, Minn.

▲ For more details circle NED-882 E5 on enclosed inquiry slip ▲

NEW!



ASCO TIME DELAY RELAY
handles motor loads directly

For brake winding motors: Each time the motor controller is operated to off, this relay closes, energizing the brake winding for an adjustable definite time.

For "Single Pulse" time delays: Each momentary pushbutton action closes the relay. The relay automatically disconnects the circuit ½ to 6 seconds later.

For "Repeated Cycling" time delays: Repeated closings and drop outs at ½ to 6 second intervals are provided with the external contact closed.

And selection of the timing period is made by an easy screwdriver adjustment of the simple locking type rheostat.

Typical ASCO quality construction includes double break silver contacts with wiping action, a clapper type magnet with oilite bearings at pivot, and a low loss silicon steel magnet frame. The distance between opposite polarities is well in excess of NEMA and UL requirements for 600 volts.

This ASCO Relay Combination is suitable for any time delay from ½ to 6 seconds, at any standard voltage.

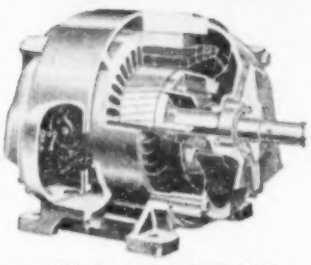
Write for complete data.

Automatic Switch Co.
379-B Lakeside Avenue, Orange, New Jersey

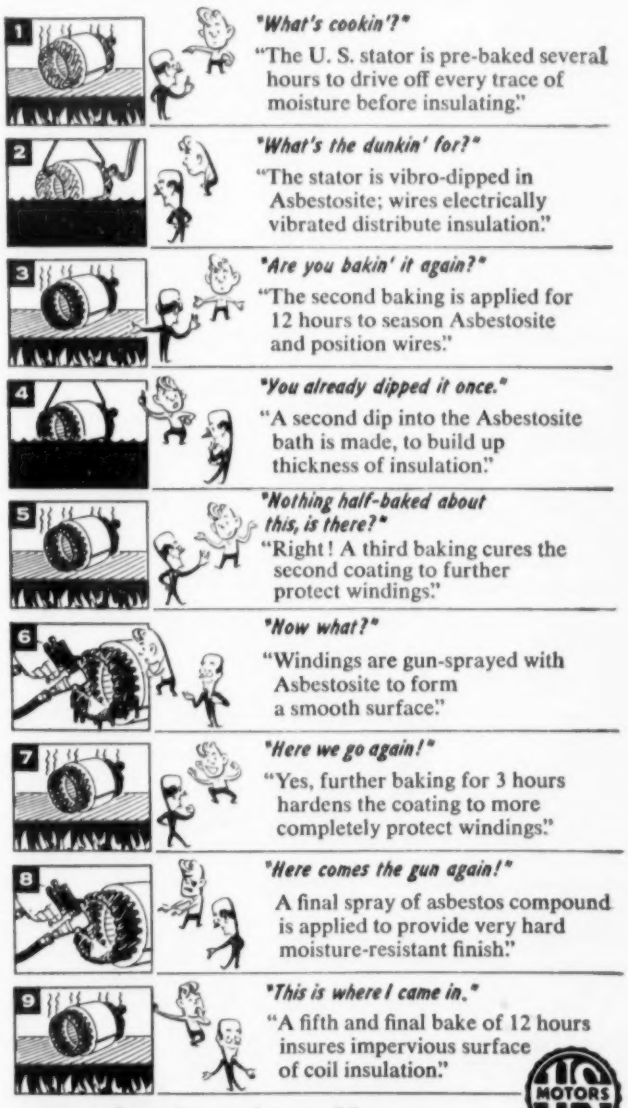
ASCO
Automatic Transfer Switches
Electromagnetic Controls
Solenoid Valves

▲ For more details circle NED-883 E5 on enclosed inquiry slip ▲

Asbestos-Protection
gives longer life to every U.S. MOTOR



Asbestos, Nature's only incombustible fiber, insulates U.S. motor windings. Asbestos effectively resists burnouts because it will withstand high operative temperatures, *proved by 30 years of performance*. Materials commonly used for insulation will carbonize, whereas *asbestos* remains invulnerable to heat attack; hence *longest life!*



1 *"What's cookin'?"* "The U. S. stator is pre-baked several hours to drive off every trace of moisture before insulating."

2 *"What's the dunkin' for?"* "The stator is vibro-dipped in Asbestosite; wires electrically vibrated distribute insulation."

3 *"Are you bakin' it again?"* "The second baking is applied for 12 hours to season Asbestosite and position wires."

4 *"You already dipped it once."* "A second dip into the Asbestosite bath is made, to build up thickness of insulation."

5 *"Nothing half-baked about this, is there?"* "Right! A third baking cures the second coating to further protect windings."

6 *"Now what?"* "Windings are gun-sprayed with Asbestosite to form a smooth surface."

7 *"Here we go again!"* "Yes, further baking for 3 hours hardens the coating to more completely protect windings."

8 *"Here comes the gun again!"* A final spray of asbestos compound is applied to provide very hard moisture-resistant finish."

9 *"This is where I came in."* "A fifth and final bake of 12 hours insures impervious surface of coil insulation."

Exclusive in all U.S. MOTORS

For Booklet(s) showing advantages of Asbestos-Protection in Varidrives, Uniclosed Motors, Totally-Enclosed Motors or Syncrogear Motors write: NED-5

U.S. ELECTRICAL MOTORS Inc.
P. O. Box 2058, Los Angeles 54, Calif. or Milford, Conn.

▲ For more details circle NED-884 E5 on enclosed inquiry slip ▲

FLEXIDYNE

THE DRY FLUID DRIVE

NEW! REVOLUTIONARY!

Handles difficult starting problems and gives a *new* kind of protection against shock and overloads. The dry flow-charge can be varied to give exact torque you need. When load reaches normal speed there is zero slip, giving 100% efficiency. Write for bulletin with detailed information on Flexidyne Drives and Flexidyne Couplings.

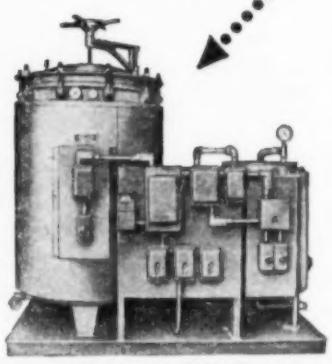
DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE

of Mishawaka, Ind.

▲ For more details circle NED-885 E5 on enclosed inquiry slip ▲

HERE'S THE **SURE CURE** for MOST HYDRAULIC TROUBLES.....



25 TO 600 GPH CAPACITY

The HOFFMAN OIL CONDITIONER

You put a definite stop to the cause of most difficulties in hydraulics systems—dirty oils—when you put a HOFFMAN Oil Conditioner to work.

HOFFMAN Oil Conditioners *recondition all types* of contaminated industrial oils—removing both the sludge and solid contaminants plus the "lighter" fluids that change the characteristics of your oil. This two-way clean-up results from the Hoffman's combining two processes in one operation. Oil to be treated is first forced through a "tight" filter, specifically selected for the purpose, where all solid matter is removed—and then the oil goes through a "flash" vaporizer which bakes out all the thinner, higher volatility diluting liquids. This double treatment restores the oil to original prime condition.

Built in capacities from 25 to 600 gph—or bigger for special installations, HOFFMAN Oil Conditioners come in stationary or portable models. They can hook into hydraulic systems for reconditioning the oil without interrupting your equipment's operation. They are now turning in fabulous economy records in oil conditioning on hydraulic oils in aviation and other fields, and on insulating, compressor, turbine, diesel lube, vacuum pump, cable and roll, and other industrial oils.

Another basic style in the industry's most complete line of filtration equipment is this HOFFMAN Disc Filter. First designed to meet aviation requirements of small space, light weight, and low initial cost—yet providing high flow, this disc style is now a favorite in industry for easy installation, efficiency, dependability, and low maintenance.

HOFFMAN Cartridge Filters, with many kinds of media, perform specific separations—even the removal of most minute particles. Wide range of designs and capacities permits exact selection for your particular need.

Let Hoffman Filtration specialists co-operate in correcting your maintenance problems in oil and other fluids. Send in the coupon for bulletins on specific types of Hoffman Industrial Filtration Equipment.

INDUSTRIAL FILTRATION DIVISION

U. S. HOFFMAN MACHINERY CORPORATION

Dept. NED, 105 Fourth Ave., New York 3, N. Y.

U. S. HOFFMAN Machinery Corp.
Dept. NED, 105 Fourth Ave., New York 3, N. Y.
Please send me the bulletins checked on Hoffman Filtration Equipment.

Name .....
Address .....
City ..... State .....

___ Disc Filters
___ Cartridge Filters
___ Oil Conditioners
___ Pressure Filters
___ Flotation Clarifiers
___ Magnetic Separators
___ Vacu-Matic Filters

▲ For more details circle NED-886 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

Hydraulic Standards

Miller Fluid Power Co.—Revised up-to-date issue of the "J.I.C. Hydraulic Standards for Industrial Equipment" also includes recommended practices on hydraulic packings and seals, examples of packing code identification, sample circuit using J.I.C. symbols and glossary of terms. The 20-page pamphlet is hole-punched for insertion in standard catalogs.

▲ For more details circle NED-887 E5 on enclosed inquiry slip ▲

Pneumatic Controls & Transmission Systems

Minneapolis-Honeywell Regulator Co., Industrial Div.—48-page illustrated Handbook No. 1120 deals with pneumatic controllers, their applications and how they work. Also described are pneumatic transmission systems and cascade, ratio and other interconnected control systems. Practical information is given on how to tune pneumatic controllers to a process, how to introduce manual adjustments and how to provide the best air supply.

▲ For more details circle NED-888 E5 on enclosed inquiry slip ▲

Adjustable Speed Drives

Machinery Electrification, Inc.—Series of seven data sheets provides detailed information on MEK-2158 fractional horsepower adjustable speed drives. These drives consist of controlled rectifier unit, control station and shunt wound direct-current motor of from 1/8 to 1/2-hp rating. Motor is designed to hold speed through load variations from no-load to full load.

▲ For more details circle NED-889 E5 on enclosed inquiry slip ▲

Sintered Bronze Filters

Permanent Filter Corp.—How a handful of bronze balls started a new industry is explained in 16-page catalog on sintered bronze filters. Made by fusing together millions of microscopic bronze balls, this filter medium is virtually unaffected by temperature extremes and corrosive liquids and gases. It will remove contaminants as small as 2 microns.

▲ For more details circle NED-890 E5 on enclosed inquiry slip ▲

Oil Industry Pumps

Viking Pump Co. — Positive-displacement rotary type Viking pumps which are specifically designed for oil industry application are subject of 14-page illustrated catalog section G. Rated 35, 50, 90, 150, 200 and 300-gpm per unit, pumps are designed for 50 to 200-psi service. Details are given on standard and All Weather twin and multiple units, as well as on truck mounting pumps.

▲ For more details circle NED-891 E5 on enclosed inquiry slip ▲

Nylon Powder

National Polymer Products, Inc. — Chemically-treated nylon powder for cold pressing and sintering is described in 4-page bulletin "Nylasint Powder" in terms of how it can improve a wide range of industrial and consumer products. Physical and chemical properties of powder are given along with detailed information on characteristics it imparts.

▲ For more details circle NED-892 E5 on enclosed inquiry slip ▲

Nitriding Steels & Processes

Nitralloy Corp.—48-page illustrated booklet "Nitralloy and Nitriding, Including the New Floe Process" contains 17 charts and five graphs which help to define compositions, mechanical properties and case hardening capabilities of four principal types of special Nitralloy steels. Two-stage procedure for using the Floe process is described. Nitriding equipment and installations are covered.

▲ For more details circle NED-893 E5 on enclosed inquiry slip ▲

Etched Aluminum Nameplates

C & H Supply Co.—"Branded for Life" is title of 4-page folder which explains in detail how Metal-Cals, anodized etched-aluminum nameplates, can be used for trademarking, serial numbering, service labeling, catalog and parts numbering and dial and gage marking. Metal-Cals are pressure sensitive and adhere to any smooth, cohesive surface.

▲ For more details circle NED-894 E5 on enclosed inquiry slip ▲

Teflon Parts

Sparta Mfg. Co.—Production of application-engineered Teflon parts for specific uses is described in 4-page bulletin 155. Parts shown vary from 0.010 to 0.060-in. thick and have been developed and produced for such applications as shaft sealing (oil, air, etc.), high temperature sealing, and low frictional requirements. Teflon properties are tabulated.

▲ For more details circle NED-895 E5 on enclosed inquiry slip ▲

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Level
Temperature
pH
Tachometry
Current
Voltage

Fielden TEKTOLOG
Recorder-Controller

- Electronically records process variables having AC or DC outputs. Ranges 0—50 microamperes up.
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- AC operation eliminates batteries and standardization.
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LOW IN COST • HIGHLY FLEXIBLE

Robertshaw-Fulton CONTROLS COMPANY

FIELDEN INSTRUMENT DIVISION • Dept. F, 2920 N. 4th St., Philadelphia 33, Pa.

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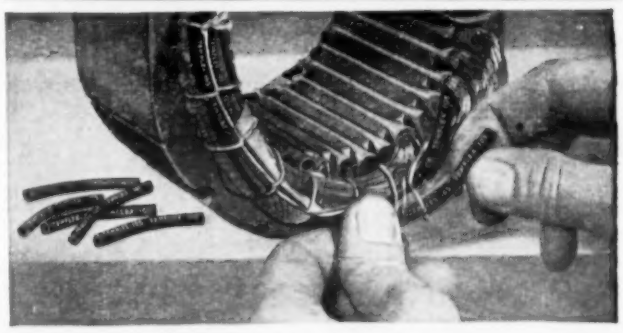

More "Cut Through" Resistance with Improved Temflex* 105 Plastic Tubing

Need a tough, wear resistant plastic tubing? New formula Temflex 105 has improved heat deformation characteristics and resistance to "cut through", averaging 20% over older type tubings in standard penetration tests. Better high temperature color stability and lower shrinkage percentages too.

And there's no loss of the remarkable properties that originally made Temflex 105 so popular! Retains high dielectric strength and flexibility after varnishing, baking or high temperature duty. Resists common solvents. UL approved for continuous 105° C operation. Eliminates soldering and cuts assembly costs when insulating transformer leads, relay leads, etc. Fits all standard wire sizes.

Send for literature and test samples.

*T.M. Reg. U.S. Pat. Off.

PLASTICS PRODUCTS

IRVINGTON DIVISION
MINNESOTA MINING & MANUFACTURING COMPANY
14 Argyle Terrace • Irvington 11, New Jersey

1905-1955 Golden Anniversary Year

▲ For more details circle NED-897 E5 on enclosed inquiry slip ▲

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VERTICAL AND HORIZONTAL EXPANSION.

COST 66⅔% LESS.

GET FACTS TODAY!

Diebold Steel Files with sintered Nylon-Glides are the most economical and efficient units available. Economy starts with price (as low as one-third the cost of fixed 22-drawer cabinets). Diebold files save space . . . stack ceiling-high without drawer-bind. Other advantages: permanent anti-friction drawer operation . . . followers compress cards tightly . . . easy grip rear carrying bars . . . positive drawer stops. For **top-drawer** economy and efficiency . . . specify Diebold. Send for details today.

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Canton 2, Ohio

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NEW BULLETIN FEATURES SK VALVES FOR POWER AND INDUSTRIAL USE

SEND FOR YOUR FREE COPY

Here's a bulletin you need for quick reference on SK Valves: *Bleeder Check, Boiler Feedwater, Venturi Reducing, Heater Bypass, Balanced Butterfly, Atmospheric Relief.* Includes description of SK's High Pressure Strainer.

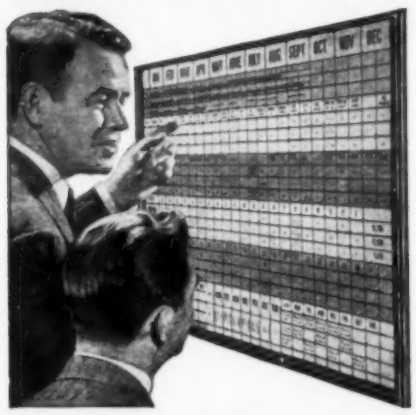
New Bulletin V-1 includes information on: *SK designs and their specific advantages and the construction features of each valve. Other type valves made by SK are listed and SK's quality control and testing facilities are described.*

For your free copy, write today to:

SCHUTTE AND KOERTING CO.
2227 State Road, Cornwells Heights, Bucks County, Pa.

▲ For more details circle NED-899 E5 on enclosed inquiry slip ▲

GRAPHIC VISUAL CONTROL



THE BOARDMASTER SYSTEM

- ★ Graphic Picture of Your Operations—Spotlighted by Color
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- ★ Simple and Flexible—Easily Adapted to Your Operations
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GRAPHIC SYSTEMS, 55 West 42nd St., New York 36

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FOR YOUR FLOW CONTROL

WATERMAN FLOW REGULATOR MODEL 1407-4 has minimum to maximum flow adjustment obtained by 180° handle rotation. Flow rate changes easily accomplished. Adjustable handle tension eliminates need for wrenches and locking levers. For installations requiring frequent changes in operating speeds or throttling control. Either right or left rotation of control handle. Operator can control two operations simultaneously.

Write for latest illustrated bulletin H

WATERMAN ENGINEERING COMPANY
725 CUSTER AVENUE • EVANSTON, ILLINOIS

▲ For more details circle NED-901 E5 on enclosed inquiry slip ▲

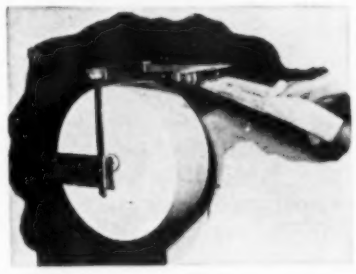
New Processes & Materials

RUBBER PACKING SET secured by key chain

This industrial rubber sheet packing set, secured by metal key chain for easy access to desired sample, is now available. Set includes popular red and black sheet, diaphragm, cloth inserted, all rubber and neoprene materials which are used to make a variety of gaskets. Sample set can be obtained by writing on company letterhead to **Hamilton Rubber Mfg. Corp.**, 51 Mead St., Trenton 3, N. J.

▲ For more details circle NED-902 E5 on enclosed inquiry slip ▲

WIPING FABRIC offered in widths of 10 and 20 in.



Furnished in rolls to fit special dispensers, Absorb-Al wiping fabric is highly absorbent, economical and easily disposed of after use. Fabric is pulled out to desired length and torn off along dispenser's cutting edge. Dispenser is constructed of heavy gage blue and silver steel, machined to close tolerances. It is installed in 10 or 20-in. width sizes on yearly token rental basis of $5 and $7. Various styles of fabric are available. Offered by **Cleveland Cotton Products Co.**, Dept. NED, 1833 E. 23rd St., Cleveland 14, O.

▲ For more details circle NED-903 E5 on enclosed inquiry slip ▲

PLATED METALS SELECTOR gives data on 14 combinations

Data revealed at a glance by slide-chart Sampler-Selector on 14 combinations of preplated metals includes base metal, plated surfaces, sheet and strip sizes, gages, tempers, properties and uses. Selector features eight samples of Nickeloid metals with the following finishes and patterns: bright chrome, satin nickel, bright copper, satin brass, ¼-in. horizontal stripe, diagonal crimp, square crimp and ⅛-in. diamond stripe. It can be obtained by sending company letterhead request to **American Nickeloid Co.**, Peru, Ill.

▲ For more details circle NED-904 E5 on enclosed inquiry slip ▲

CEMENT-BASE PAINT prevents water seepage in masonry

Applicable to wet or dry walls without saturating them with water before and after, Waterfoil ready mixed cement-base paint prevents water seepage in basements, silos and elevator pits. Use can be

on masonry or cinder block walls. Material expands within surface voids into a cementitious coating that cures into a stone-like water barrier which permits breathing of the underlying masonry but does not allow passage of water. Application is with a whitewash brush and drying is in 8 to 10 hours. Two coats are recommended. Paint is nontoxic and available in white, gray, green, rose and buff colors. Made by **Sun Chemical Corp.**, A. C. Horn Div., Dept. P, Tenth St. & 44th Ave., Long Island City 1, N. Y.

▲ For more details circle NED-905 E5 on enclosed inquiry slip ▲

OVER-LOOKING A HAZARD?

You are if you are undersignalled! All hazardous places or operations can't be eliminated, but their existence can be identified and pinpointed with an audible or visible warning signal.

A small investment in a FEDERAL Beacon Ray light, siren, horn or bell can save a life, avoid a painful injury or prevent a mechanical failure. One such saving, translated into dollars and cents may be the difference between success and failure.

FEDERAL offers the most extensive variety of safety signals.

FEDERAL 27S Beacon Ray

FEDERAL Type A Siren

Write for Industrial Signal Literature.

FEDERAL SIGN and SIGNAL Corporation
formerly Federal Enterprises, Inc.
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Chicago 19, Ill.

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REDUCE YOUR REPLACEMENT COSTS... BUY MONARCH PREMIUM QUALITY TIRES AT STANDARD PRICES.

Tires . . . a small item in the initial cost of a materials handling truck . . . are a big item in maintenance budgets if they require frequent replacement.

To give you longer tire life, MONARCH uses only the best materials . . . even better than those used in *"premium" passenger car tires* . . . in its special solid tire compounds.

When you buy MONARCH tires, you're getting the finest available today . . . and they cost no more than other leading brands.

If economy is your goal . . . MONARCH IS YOUR TIRE!

TORTURE TESTS PROVE . . .

. . . MONARCH tires can take a beating and still outperform other brands. For the detailed story, WRITE TODAY FOR BULLETIN TD-200.

6193-MR

THE MONARCH RUBBER COMPANY
260 Lincoln Park • Hartville, Ohio
7-255 General Motors Bldg., Detroit 2, Mich.

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CHAIRS AND STOOLS
SAVE TIME AND MONEY

3 WAYS

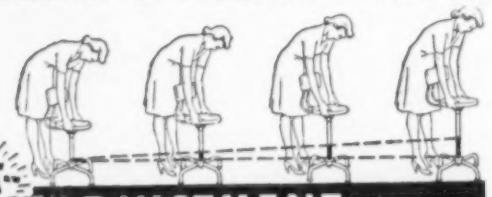
1. Avoids confusion and lost time at start of each period, enables each worker to adjust seat height to fit own requirements.
2. Saves time of supervisors, foremen and maintenance men. Relieved of locating and adjusting seats for each employee.
3. Sturdy construction and special features eliminates maintenance costs—save as much as $3.00 per unit per year.

Sizes and models to meet any requirement. No tools needed—just lift seat to desired height—holds securely where upward lift stops. 2-way backrest adjustment gives support to stop fatigue. Reduces absenteeism.

FREE TRIAL
Try an Ajustrite for 30 days without obligation. The quick, easy, adjustment will surprise you

AJUSTO EQUIPMENT CO. • 2144 Madison Ave. • Toledo 2, Ohio

Adjusts
15" to 20"
18" to 26"
24" to 35"



SPLIT-SECOND ADJUSTMENT • • • TO ANY HEIGHT DESIRED

For more details circle NED-911 E5 on enclosed inquiry slip

Here's the most

VERSATILE CRANE you can buy!

THIS BROCHURE describes the full line, complete with all specifications.

Available in seven models, with capacities from one-half to three tons. Every Tubarcrane has a three-position built-in extension boom—no extras to buy! Pumping effort is easily adjustable. Tilt-back mast provides more area for lifting bulky loads. Write for literature today!

Tubar CRANE

Manufactured by UHRDEN, INC. • DENNISON, OHIO
Jobber Territories Available
Also request literature on Tubar Hand Trucks, Platform Trucks, Tubarlifts
U-255-105

For more details circle NED-912 E5 on enclosed inquiry slip

ALUNDUM B Abrasive adds the "Touch of Gold" across the range of polishing jobs

Norton ALUNDUM B abrasive is a truly all-purpose polishing grain, expertly engineered to add the time-saving product-improving "Touch of Gold" to all your polishing jobs, from roughing to fine finishing. Here's why:

It's made in consistently uniform grain shape and size — solid, blocky grains that stand up longer and polish faster . . . Its high capillarity assures the easy absorption of adhesive that means longer lasting, better performing set-up wheels . . . It's equally successful with cement or glue . . . It's available in all grit sizes from 20 through 240, meeting the widest variety of polishing needs.

See Your Norton Distributor for prompt deliveries of Norton ALUNDUM B abrasive. Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass.

G-285

NORTON — Making better products... to make your products better
and its BEHR-MANNING division
NORTON: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

For more details circle NED-913 E5 on enclosed inquiry slip

New Literature & Catalogs

Hydraulic Pullers

Owatonna Tool Co.—28-page hydraulic bulletin Hy-55 catalogs data on OCT 17½, 30, 50 and 100-ton Power-Twin rams. Actual service operations involving hydraulic removal and installation of gears, bearings, pulleys, wheels, bushings, cylinder sleeves, king pins, crawler tractor sprockets and railway journal bearings are shown. Hydraulic presses in same capacities are covered also.

For more details circle NED-914 E5 on enclosed inquiry slip

Straightening Pipe & Tube

Mackintosh-Hemphill Co.—Advantages of rotary straightening of ferrous and nonferrous pipe and tube by this company's equipment are related in 24-page illustrated technical bulletin No. 55 "How to Straighten Pipe and Tube." Adjusting and operating the rotary straightener, design and use of entry and delivery tables, flood lubrication and single and multispeed drives vs. variable speed drives are among subjects discussed.

For more details circle NED-915 E5 on enclosed inquiry slip

Fiber Glass Panel Skylights

Marco Co.—Three bulletins identified with file numbers 12-j, 12-p and 12-i respectively describe roof skylights, roof scuttles and cross and octagon shaped skylights made with aluminum frames and corrugated fiber glass panels. Skylights have either over-curb construction, or have self-contained curb and roof flange. Scuttles open up for access to roof or for ventilation purposes.

For more details circle NED-916 E5 on enclosed inquiry slip

Sawing, Filing & Grinding Machines

DoALL Co.—20-page catalog 54-702 describes Contour-matic machines that saw, file, polish and grind, and which feature hydraulically-powered tables and controls. Features of machines which permit full use of Demon high-speed steel saw band are pointed up. Band will stay hard at 1100° F. High speed band saws for light metals, wood, plastics and friction saws for ferrous metals are covered as well.

For more details circle NED-917 E5 on enclosed inquiry slip

Rubber Insulated Cable

Okonite Co.—32-page bulletin 1090 covers current-carrying capacities, dimensions, installation and handling, splicing and terminating of rubber insulated Loxarmor cable. Cable is designed for use in racks or trays for applications where rigid conduit systems are undesirable. It can be used at conductor temperatures up to 80° C at voltages up to 15 kv.

For more details circle NED-918 E5 on enclosed inquiry slip

Parallel Shaft Gear Drives

Link-Belt Co.—Line of parallel shaft gear drives described in 32-page book 2619 includes 39 standard size single, double and triple reduction drives. Standard ratios range from 1.2:1 to as large as 323:1, with horsepower capacities to over 2000. Complete engineering data includes horsepower tables, dimensions and overhung load capacities for selection from standard line.

For more details circle NED-919 E5 on enclosed inquiry slip

Carbide Tools & Products

Valenite Metals Corp.—36-page illustrated catalog A contains physical data and complete grade recommendations on carbide tips, tools, throw-away blanks and tool holders. Carbide equivalent charts aid in grade selection and application.

For more details circle NED-920 E5 on enclosed inquiry slip

Vapor Degreasers

Ramco Equipment Corp.—Vapor degreasing equipment used to free metal surfaces from grease, oil, resin, wax or lubricants before further processing testing or machining is subject of descriptive 4-page bulletin 953-1. Pure vapor, vapor spray and liquid-vapor degreasing cycles, and where each is utilized by Ramco equipment, is described.

For more details circle NED-921 E5 on enclosed inquiry slip

Ventilating Air Diffusers

Anemostat Corp. of America—64-page illustrated selection manual is guide to the application and performance of aspirating type air diffusers for heating, ventilating and air conditioning service. Design and installation data are presented.

For more details circle NED-922 E5 on enclosed inquiry slip

TEST HARDNESS OF ANY SIZE, SHAPE, TYPE METAL . . . anywhere . . . in one easy motion!

This 30 oz., 3 in. high tester, in 30 seconds, gives direct dial readings on the job. Just press handgrips, read dial.

Accuracy guaranteed by individual calibration. Direct reading. No calculations! No conversions. Scales corresponding to:

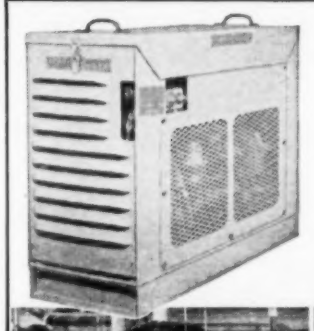
Rockwell "A" 35-75 Scale
Rockwell "B" 5-100 Scale
Rockwell "C" 10-70 Scale
Rockwell "15N" 70-95 Scale
Brinell Medium 100-440 Scale
Brinell Low 50-260 Scale

Write today for Booklet ET 668 or demonstration in your shop.

NEWAGE INTERNATIONAL portable metal hardness testers
ERNST PATENT #2536632. MADE IN U.S.A.

NEWAGE INTERNATIONAL, INC., 235 E. 42 ST., NEW YORK, N. Y.
DISTRIBUTORS' INQUIRIES INVITED

For more details circle NED-923 E5 on enclosed inquiry slip



NEW! READY-POWER "BANTAM" GAS-ELECTRIC POWER UNITS

FOR MOTORIZED WALKIE AND SMALL RIDER TRUCKS

The new Model W is the most compact, most dependable power generating unit ever built for small trucks. Combining new performance and versatility, the *Bantam* features new 12-volt automotive starting and ignition system, complete choice of idling speed. It fits practically every make in the small electric truck field. Removable cover and end plate provide complete access for servicing engine and generator. Write for information.

READY-POWER
The READY-POWER Co., 3832 GRAND RIVER AVE., DETROIT 8, MICH.
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-924 E5 on enclosed inquiry slip

Specify CONTINENTAL UST IDLERS

• UNIT-SEALED
• TIMKEN BEARINGS
• PRE-LUBRICATED

Saves GREASE! Saves LABOR! Saves BELTS!
If you use belt conveyors—you need Continental Idlers!
Write for Bulletin NED-116
ALL SIZES! ALL TYPES! CG-5302

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

For more details circle NED-925 E5 on enclosed inquiry slip

Get both "Showroom Sell" and Lasting Wear

with

PIC STEEL UNIONS!

Bright, gleaming, good looking, Pics *belong* on new products. But they've got *more* than looks! The heavy steel pipe coupling stock is exceptionally strong . . . installation is fast with open end wrenches (ends are uniformly flat-sided, uniformly parallel) . . . special wedge-type bronze seat assures tight seal . . . complete zinc plating, even on threads, to prevent rust. The cost? *Less* than a galvanized, *no more* than a black malleable union.

For 150# Service — Write for FREE Samples

DART UNION COMPANY

132 THURBERS AVENUE, PROVIDENCE 5, R. I.

For more details circle NED-926 E5 on enclosed inquiry slip

HUGLOCK

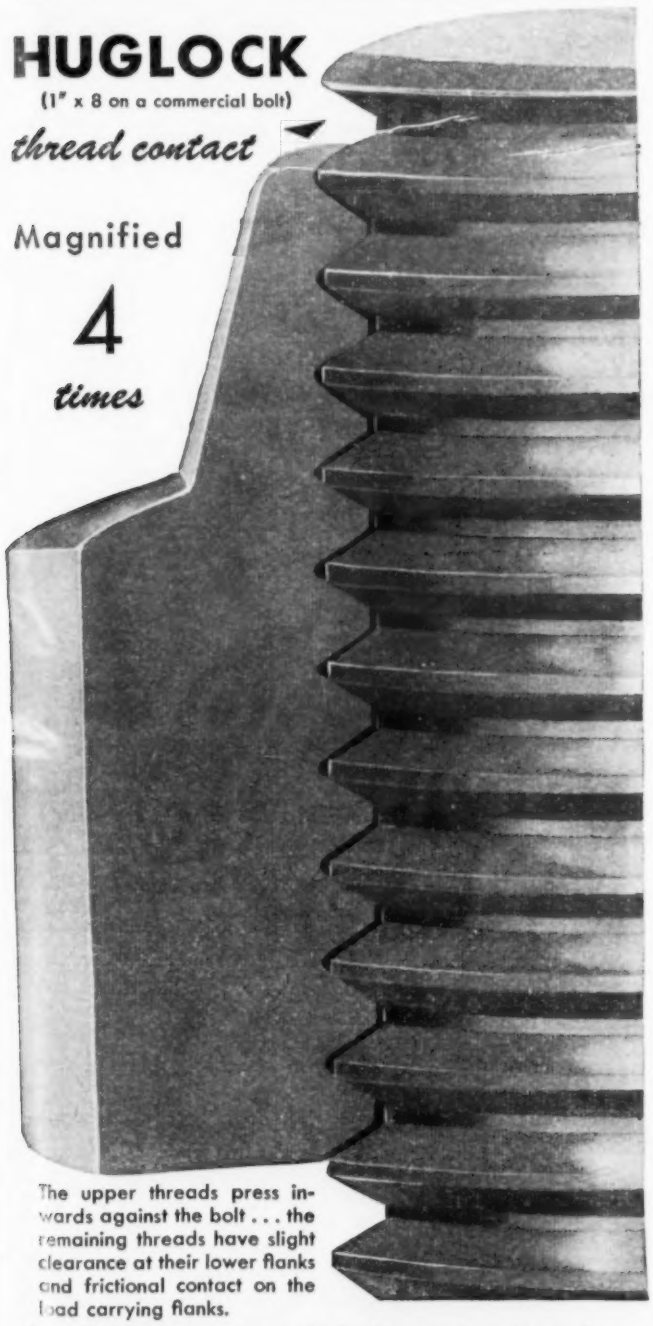
(1" x 8 on a commercial bolt)

thread contact

Magnified

4

times



The upper threads press inwards against the bolt . . . the remaining threads have slight clearance at their lower flanks and frictional contact on the load carrying flanks.

"HUGLOCK" maintains its locking action through repeated removals . . . locks to the bolt, whether the nut is seated or unseated . . . eliminates axial thread play, which tends to make nuts creep from their seat and work loose, under severe vibration or shock . . . all lock washers, cotter pins, key plates, etc., may be eliminated . . . The "HUGLOCK" section of our new catalog, contains 24 pages, includes engineering data and prices and will be furnished upon request.

NATIONAL MACHINE PRODUCTS COMPANY

*Manufacturer of Standard and Special *12 Pointer and Hexagon Nuts . . . "Huglock" and "Marsden" locknuts.*

44231 Utica Rd., UTICA, Michigan

For more details circle NED-927 E5 on enclosed inquiry slip

New Processes & Materials

RECORDER CHARTS paper is uniform and stable

Printed under controlled humidity conditions on a white sulphite sheet, Humitex circular and strip charts meet rigid standard of uniformity and stability. Addition of sizing agents permits sharp recording without "feathering." Scale markings and time arcs are printed in neutral gray for contrast with colored recording inks. Concentricity tolerance is less than 0.002-in. between hub hole and scale circles on circular type. Charts are designed for use with sediment-free type 1500 general purpose ink and type 317 stainless steel pens. Sample circular charts sent on request. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-928 E5 on enclosed inquiry slip

PROTECTIVE PLASTIC COATING applied to baskets and shelves

Considerable savings in time and material is obtained in coating baskets and shelves with Compound 4129 cold-dip plastisol. It protects against abrasion and corrosion caused by humidity and moisture. Because of its thixotropic (flow) properties, it deposits approximately 50 per cent less than other plastisols. Coatings are applied to parts at room temperatures over a special primer which requires a short bake at 350° F. Coating is quickly cured by baking at 350 to 365° F for 20 to 30 minutes. Made by **United Chromium, Inc.**, 100 E. 42nd St., New York 17, N. Y.

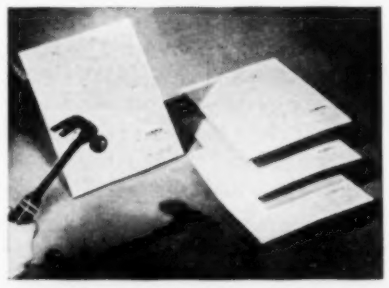
For more details circle NED-929 E5 on enclosed inquiry slip

STEEL PLATE FLOORING openings form nonskid surface

A safe solution to problem of severe floor wear in plant areas of heavy traffic is provided by No. 43 Floor Armor, foot-square 11-gage steel plates which are embedded into wet concrete. Each plate is held permanently in position by 53 snag-tooth grippers. Stamped islands or openings in the plates through which concrete extends afford a nonskid surface. Combination of steel over concrete provides protection against wear, chipping and rutting; and cracking and buckling is impossible. Made by **Wm. C. Peters Co.**, Dept. N, 2136 Conner Ave., Detroit 15, Mich.

For more details circle NED-930 E5 on enclosed inquiry slip

STYRENE SHEET has high impact strength



Fine texture, freedom from strains and improved impact strength are features of Campco S-540 rubber-modified styrene sheet. It has twice the strength of S-300 sheet. Gages from 0.010 to 0.030-in. are available with mat or polished surfaces in widths up to 26 in. Use can be on printed jobs where close register is required. Heavier gages from 0.040 to 0.187-in. can be furnished in matte, polished or high gloss finish in widths up to 40 in. Made by **Chicago Molded Products Corp.**, Campco Div., 2719 N. Normandy Ave., Chicago 35, Ill.

For more details circle NED-931 E5 on enclosed inquiry slip

PIONEER

Offers a Complete Line of Pumps for Coolants, Lubricants and Abrasive Liquids . . . Over 400 Models Available . . . Flange-mounted and Submergible

★

PIONEER

Impeller Type

0 to 174 gpm—1/2 to 5 hp—850 to 3450 rpm

ROLLWAY Positive Displacement Type

1/8 to 60 gpm—200 to 500 rpm—15 to 35 psi

Model shown above is one of a complete line of flange-mounted type pumps which provides strict conformity to J.I.C. standards.

Send today for this FREE Catalog

PIONEER PUMP DIVISION

Detroit Harvester Company

14300 Tireman Ave. Detroit 28, Michigan

For more details circle NED-932 E5 on enclosed inquiry slip

Shredded Paper

IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

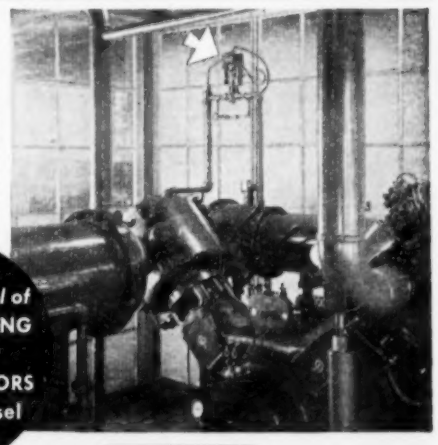
Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.

107 Mill Street Salem, Ohio

For more details circle NED-933 E5 on enclosed inquiry slip

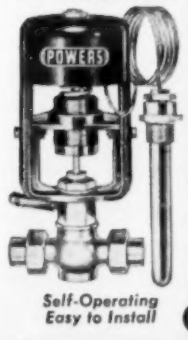
TEMPERATURE of cooling water system for 2-stage air compressor at CECO STEEL CORP. is controlled by 2 Powers Regulators



For Reliable Control of JACKET COOLING WATER In AIR COMPRESSORS Gas and Diesel Engines

Use POWERS REGULATORS

No. 11 REGULATOR



Self-Operating Easy to Install

They Improve the Efficiency and Prolong the Life of Air Compressors, Gas and Diesel Engines.

For each compressor or engine there is a "best" temperature for the cooling water. To insure that temperature at all times, regardless of variations in load or seasonal changes in temperature of water supply, install Powers No. 11 automatic regulators. They reduce operating and maintenance cost. Write for Cat. 329.

THE POWERS REGULATOR CO.

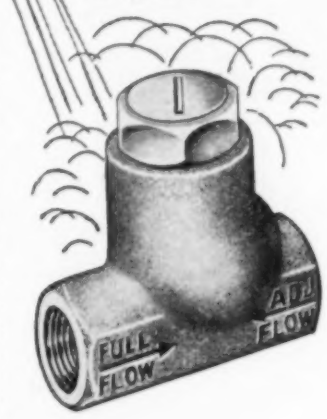
Skokie, Ill. • Offices in Chief Cities • (b54)

Over 60 Years of Automatic Temperature and Humidity Control

For more details circle NED-934 E5 on enclosed inquiry slip

Get smooth power out of your cylinders—

USE Schrader® FLOW CONTROL VALVES



Schrader Flow Control Valves give you positive control of compressed air to cylinders.

An adjustment screw permits quick increase or decrease in flow, from zero pressure to full, governing piston speed in either direction without reducing the force.

Schrader Flow Control Valves are available in five sizes, from 1/8" to 3/4" thread. They are made of corrosion-resistant materials throughout. Their simple construction allows for easy servicing without removing them from the line. These valves are also suitable for liquids. Send today for complete information.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. M-5, Brooklyn 38, N. Y.

▲ For more details circle NED-935 E5 on enclosed inquiry slip ▲

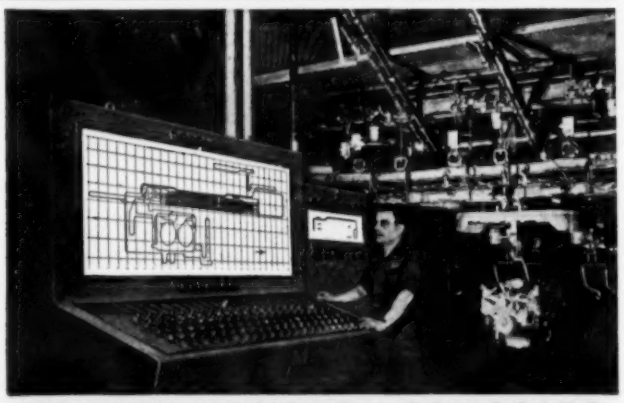
. . . naturally it's

AMERICAN MONORAIL

This American MonoRail Monotractor unit, recently installed in a rug and carpet warehouse, dispatches hard to handle, big bulky loads over a wide area. Fully automatic, with finger-tip control, with a hoist capacity of 1,000 pounds, this installation is SAVING 200 MAN HOURS PER WEEK. This is another of the many examples of American MonoRail engineering for low-cost, efficient overhead handling. Let your American MonoRail representative explain the versatility, low cost and low maintenance of American MonoRail equipment. Consultation in connection with any handling problem is available without obligation.

AMERICAN MONORAIL COMPANY
OVERHEAD HANDLING EQUIPMENT
13116 ATHENS AVENUE • CLEVELAND 7, OHIO
[IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.]

▲ For more details circle NED-936 E5 on enclosed inquiry slip ▲



REMOTE CONTROL CONSOLES

The central console pictured, controls an entire power and free conveyor system in one of the nation's largest automobile manufacturing plants. The position and movement of each carrier on the conveyor system is determined and directed by the console. A diagram of the entire conveyor system is shown on the upper portion of the console, while signal lights and control pushbuttons occupy the lower portion. Pushbuttons, signal lights and conveyor sections are color-coded for quick, positive identification.

Control Engineering Company maintains complete engineering and manufacturing facilities. We will design and build to your specifications control consoles for machine tools, conveyors, automatic manufacturing processes or any application requiring remote control or monitoring. Our sales engineers will welcome the opportunity to assist you with technical problems and application information. 4275

CONTROL ENGINEERING CO.
8921 ALPINE AVENUE • DETROIT 4, MICHIGAN
Electrical Engineers and Manufacturers
Subsidiary of: JERVIS B. WEBB CO.

▲ For more details circle NED-937 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

O-Rings, Packings & Molded Parts

Stillman Rubber Co.—Company's wide range of custom molded parts, thermoplastic and synthetic rubber O-rings and hydraulic packings made to government and commercial specifications are described in revised 24-page illustrated catalog. Permadizing, a rubber-to-metal bonding process, is covered and engineering and design data and service recommendations are given.

▲ For more details circle NED-938 E5 on enclosed inquiry slip ▲

Clamp Assemblies & Fixtures

West Point Mfg. Co.—Standard jig and fixture parts for clamping applications are subject of Wespo catalog. Clamp assemblies and fixture parts are illustrated with full-size templates. New series of clamp assemblies is described.

▲ For more details circle NED-939 E5 on enclosed inquiry slip ▲

Truck Conveyors

Link-Belt Co.—24-page booklet 2497 is descriptive of overhead and in-the-floor Trukveyors, a dragline conveying system. Industrial trucks are pulled by system over any selected path, linking receiving, storage, sorting and shipping operations with an orderly flow of traffic. Systems can be designed to travel around horizontal turns, or up and down inclines. Truck travel speeds range up to 120 fpm.

▲ For more details circle NED-940 E5 on enclosed inquiry slip ▲

Marking Inks

Louis Melind Co.—Inks for marking such surfaces as plastic, glass, nylon, meat, porcelain and plated metals are covered in the booklet "Guide to Every Marking Ink Problem." Eleven different types are covered. Certain penetrating inks dry in 30 to 60 seconds, even on smooth, hard surfaces.

▲ For more details circle NED-941 E5 on enclosed inquiry slip ▲

Choosing That Screwdriver

Bridgeport Hardware Mfg. Corp.—Right size screwdriver for any job can be selected with the aid of this 22 x 17-in. wall chart. Separate tables for wood, Phillips and machine screws are included, each showing what type and size screwdriver to use for each shank size and length.

▲ For more details circle NED-942 E5 on enclosed inquiry slip ▲

Germanium Diodes

International Rectifier Corp., Semi-Conductor Div.—Ratings and specifications for high temperature, computer, UHF mixer, meter protection and general purpose germanium point contact diodes are found in 4-page illustrated bulletin GD-2. Interchangeability and replacement chart is included.

▲ For more details circle NED-943 E5 on enclosed inquiry slip ▲

Roller Bearings

McGill Mfg. Co.—Sections on Camrol, Multirol and Guiderol series of full type roller bearings are found in revised 52-page "Size and Capacity Handbook" No. H-54. Each section contains a cutaway photograph and detailed line drawing of various models in each series, plus dimensional and load capacity tables and mounting details.

▲ For more details circle NED-944 E5 on enclosed inquiry slip ▲

Interval Timers

R. W. Cramer Co.—Exploded views, descriptive and technical data, wiring, dimension and housing information for line of interval timers are included in 8-page bulletin PB-210. Manual and automatic reset types are covered.

▲ For more details circle NED-945 E5 on enclosed inquiry slip ▲

Cabinet & Appliance Shelf Supports

Illinois Tool Works, Shakeproof Div.—Plasti-Supports are noncorrosive one-piece plastic supports for refrigerators, freezers and cabinets. They are readily assembled in equipment, cannot chip or mar finish on sheet metal and are designed for blind insertion from one side only. Complete details and specifications are given in illustrated catalog AS-64.

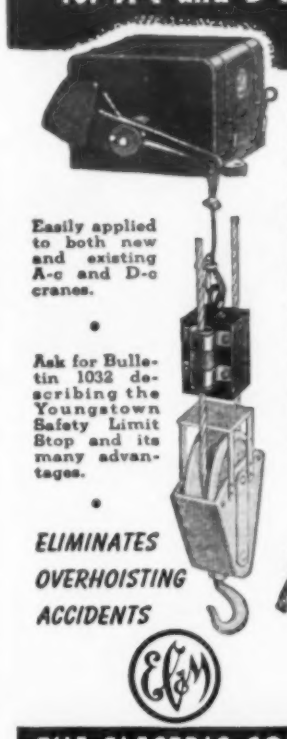
▲ For more details circle NED-946 E5 on enclosed inquiry slip ▲

Photographic Lens

Bausch & Lomb Optical Co.—Pertinent dimensions of 43 lenses adaptable to normal applications are found in this lens data book. Listed are lens covering 8, 16 and 35-mm film, as well as those for 9 x 9-in. film sizes.

▲ For more details circle NED-947 E5 on enclosed inquiry slip ▲

Safety LIMIT STOPS for A-c and D-c Cranes by EC&M



Easily applied to both new and existing A-c and D-c cranes.

Ask for Bulletin 1032 describing the Youngstown Safety Limit Stop and its many advantages.

ELIMINATES OVERHOISTING ACCIDENTS

Not only disconnects the motor from the line, but stops the motor quickly. On D-c cranes, where high hoisting speeds prevail, dynamic braking aids in bringing the hook block to rest. These Limit Stops are operated directly by the hook block, hence stretching of the hoisting cables does not affect the tripping point.

By removing the fear of an overhoisting accident, the YOUNGSTOWN Limit Stop enables the crane operator to do better work.

High interrupting capacity—Two normally open and two normally closed contacts, mechanically interlocked and with wide, vertical opening, always assure positive interruption of the hoist motor current.

THE ELECTRIC CONTROLLER & MFG. CO.
4498 LEE ROAD • CLEVELAND 28, OHIO

▲ For more details circle NED-948 E5 on enclosed inquiry slip ▲

Even workers wearing glasses say they "never had it so COMFORTABLE!"

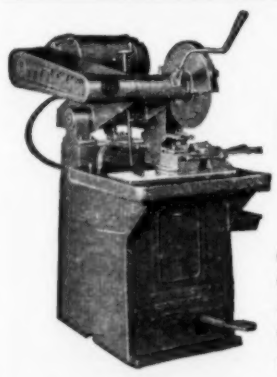
Workers who wear prescription glasses—even big plastic frames—are mighty glad to get the extra roominess provided by NO. 90A MONOGOGGLES. Its greater clearance results in utmost comfort.

Ask your Willson distributor to demonstrate its unique protection against light impact hazards like those found in spot welding, buffing, woodworking and chemical handling. You have a choice of ventilated or non-ventilated frames, clear or green plastic lenses. Bulletin mailed promptly on request.

Every exclusive feature in NO. 90A MONOGOGGLES® adds up to Lightweight Comfort—Extra Convenience—Superior Impact Resistance!

More Than 300 Safety Products Carry This Famous Trademark
WILLSON®
Leaders in Research and Development of Safety Equipment Since 1870
WILLSON PRODUCTS, INC.
219 Washington St. • Reading, Pennsylvania

▲ For more details circle NED-949 E5 on enclosed inquiry slip ▲



THE CINCINNATI Wet Abrasive Cut-Off Machines

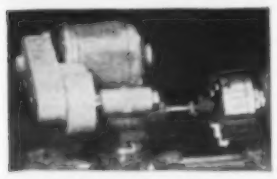
Cut Down ON **CUT-OFF TIME!**

Cut any metal, solids or tubing, fast and accurately! Capacity up to 2¼" in solids 3½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . . 2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today! Ask for name of your nearest distributor or Bulletin 55HD.

TRADE *The Cincinnati* MARK

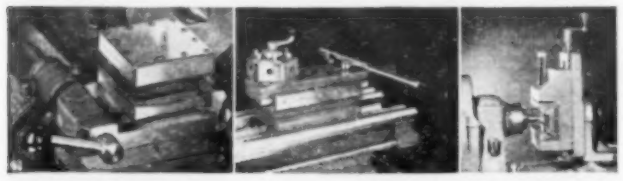
THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
2698 Madison Road, Cincinnati 8, Ohio

▲ For more details circle NED-950 E5 on enclosed inquiry slip ▲

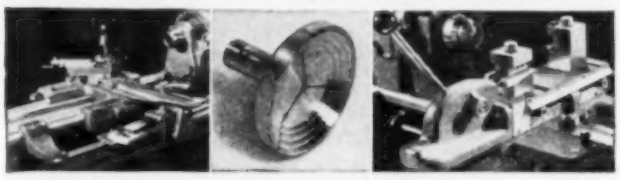


Internal Grinder

SOUTH BEND
Lathe Attachments
• Increase Lathe Versatility
• Simplify Difficult Jobs



Turret Tool Block — Handlever Bed Turret — Milling Attachment



Taper Attachment — Step Chuck — Handlever Cross Slide

10-in-1 Tool Holder — Handlever Collet — External Grinder

WRITE FOR CATALOG 5102 SOUTH BEND LATHE
Building Better Tools Since 1906 • SOUTH BEND, INDIANA
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INSIST ON THE BEST

Zallea
EXPANSION JOINTS FOR EVERY PURPOSE
Request Bulletin 351.

ZALLEA BROTHERS
818 LOCUST STREET, WILMINGTON 99, DELAWARE
WORLD'S LARGEST MANUFACTURERS OF EXPANSION JOINTS
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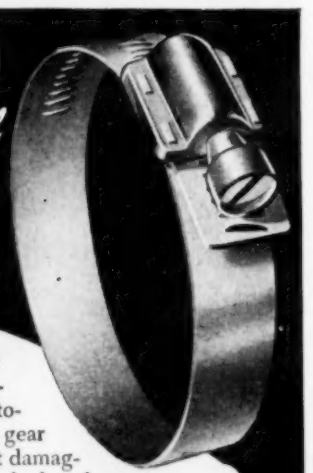
How can YOU use Aero-Seal HOSE CLAMPS?



• AERO-SEALS – the finest hose clamps made, were designed for aviation and automotive use. Precision worm gear drive tightens evenly without damaging hose or material, stays locked with a never-let-go grip. Stainless steel bands resist corrosion. Application and removal takes mere seconds. Re-usable over and over.

Design engineers, production and maintenance men find AERO-SEALS perfect for many special uses. Your product or plant can use them, too. Available in the widest possible range of sizes. Write for details.

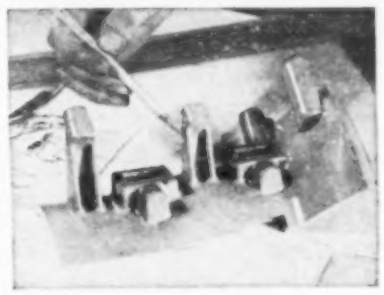
Aero-Seal® PRECISION WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC. 700 Liberty Ave., Union, N. J.
▲ For more details circle NED-953 E5 on enclosed inquiry slip ▲

New Processes & Materials

ENAMELED ALUMINUM CASTINGS have color appeal, protected surface



Vitreous enamel applied to aluminum castings makes use of inert pigments and light-fast colors which retain their original appearance and are resistant to stain and discoloration. Wide range of colors can be used. Enamel itself provides a surface resistant to alkalies, acids and detergents, as well as to thermal shock, salt water corrosion and abrasion. It can also be used to control heat distribution. Finished castings can be machined and component assemblies can be welded without serious damage to the surface. Illustration shows how bosses, thick and thin areas and irregular planes can be enameled. Developed by **Monarch Aluminum Mfg. Co.**, 9305 Detroit Ave., Cleveland 2, O.

▲ For more details circle NED-954 E5 on enclosed inquiry slip ▲

THREAD COMPOUND for applications up to 1800° F

Developed for stainless steel and high temperature applications up to 1800° F, Fel-Pro C-5 Hi-Temp thread compound prevents seizing and galling of studs, bolts and threaded assemblies and will prevent galvanic pitting of dissimilar metals. It is formulated of colloidal-copper base in a nonvolatile viscous carrier, and is noncorrosive and easy to apply. Made by **Felt Products Mfg. Co.**, 1510 Carroll Ave., Chicago 7, Ill.

▲ For more details circle NED-955 E5 on enclosed inquiry slip ▲

SPRAY-ON INSULATION for coils, motors and wires

Insulation of stator windings, coils, armatures and similar electric components is simple matter with Red Synthetic Insulator which is supplied in self-spraying pressurized container. Nonvolatile and dry, insulator provides an oilproof, water, acid and alkali resisting finishing varnish over old or new motor parts. Wet dielectric strength is 800 vpm; dry, 1400 vpm. It air dries tackfree in 20 minutes and hardens in 90 minutes. Available from **Monarch Electric & Supply Co.**, 518 First St., LaSalle, Ill.

▲ For more details circle NED-956 E5 on enclosed inquiry slip ▲

DEODORANT-DETERGENT-SANITIZER offers economy and time saving

Advantages of economy, time-saving and low inventory are offered by Adds hard surface cleaning agent which deodorizes and sanitizes as well in one operation. Product utilizes a concentrated, nonionic synthetic detergent which takes care of the average cleaning problems in hospitals, institutions and plant washrooms. It does not depend on sanitizing action alone to kill unpleasant odors caused by odor-forming bacteria and molds, but incorporates odor counteractants as well. Adds has phenol coefficient of 7.5 (S. typhosa) and 9.2 (M. pyogenes aureus), reduced proportionately in use dilution of 5 oz of Adds to each gallon of water. Cleaner is available in 1, 5, 15, 30 and 55-gal lined containers. Formulated by **Airkem, Inc.**, Dept. NE, 241 E. 44th St., New York 17, N. Y.

▲ For more details circle NED-957 E5 on enclosed inquiry slip ▲

CHECK 100 FACTS...
about the NEW—

TOTALLY PROTECTED
A-C. MOTORS

Write today for your copy of this new Bulletin B-2401, or call your nearest Reliance district sales office or distributor.
B-1499-D

RELIANCE Precision-Built MOTORS
RELIANCE ELECTRIC AND ENGINEERING CO.
1082 Ivanhoe Road • Cleveland 10, Ohio
Canadian Division: Welland, Ontario
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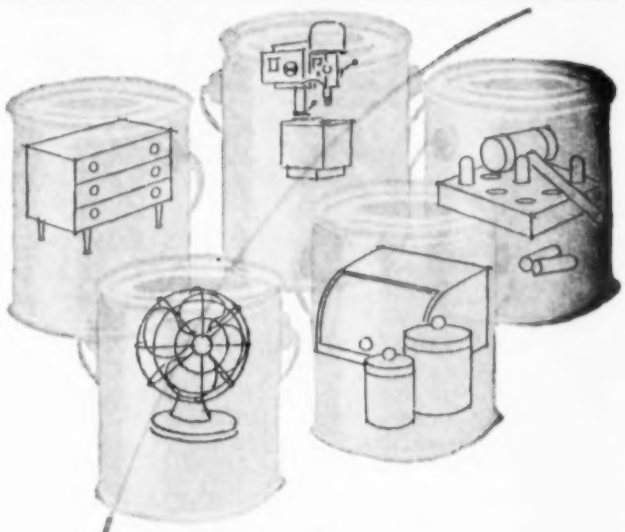


These Standard finishes meet Special needs
in most cases... in most places!

How much are "special" product finishes costing you unnecessarily—in money . . . time . . . inconvenience? Sherwin-Williams Standard Product Finishes, today, offer a range of locally-available industrial-quality materials that meet the needs of a great majority of industrial applications. In many cases, in many places, they offer time-saving, money-saving solutions to finishing requirements, both for wood and metal, for dip, spray, brush or other forms of application.

If your product finishing operations involve any of the types of materials indicated, it will pay you to investigate. Contact your nearby Sherwin-Williams Branch, or mail the coupon below for more information.

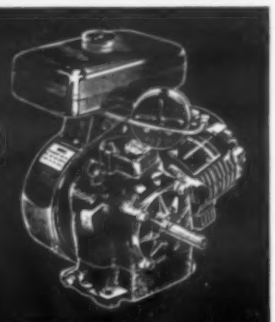
☐ Kem Lustral® Enamel
☐ Furniture Finishes
☐ Kem® Fast Bake Enamel
☐ Fast Dri® Synthetic
☐ Kem® Art Metal
☐ Opex® Industrial Lacquer
☐ Dimenso® (Hammered)
☐ Clear Lacquers
☐ Production Blacks
☐ Ajax Insulating Varnishes
☐ BH (Handle) Lacquers
☐ Machine Tool Finishes

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES
The Sherwin-Williams Co.
General Industrial Division, Cleveland 1, Ohio
Please send information on products checked.

NAME _____
COMPANY _____
ADDRESS _____

▲ For more details circle NED-959 E5 on enclosed inquiry slip ▲

Extra-Tough JOBS Call for EXTRA-DEPENDABLE POWER



The more you have to gain through uninterrupted performance, the more you need the extra dependability of Red Seal* heavy-duty air-cooled power. Carter center-bowl type carburetor, improved manifolding, valving and cooling, join with greater displacement to give you more "lug" at low speeds—more usable power at high—greater dependability and economy throughout the entire range.

MODEL AUB5
NOTE COMPACTNESS—This 3-h.p. engine is 13⅛" high.

OPTIONAL RED SEAL FEATURES

Patented, exclusive Contex* external ignition system, instantly accessible for adjustment or repair . . . Automatic ignition cut-off stops engine if oil level falls dangerously low . . . New, sure-grip recoil starter assures instant starting every time . . . 6:1 reduction gear may be mounted in any of four positions . . . Engines may be had for operation on kerosene.

• • •

SERVICE FACILITIES AND RED SEAL PARTS AVAILABLE EVERYWHERE

*TM REG.

Continental Motors Corporation
AIR-COOLED INDUSTRIAL ENGINE DIVISION
12800 KERCHEVAL AVENUE • DETROIT 15, MICHIGAN

▲ For more details circle NED-961 E5 on enclosed inquiry slip ▲

TYGON "ATD" Hot Spray PAINT

TWO COATS DO THE WORK OF FIVE

Yes, two coats of Tygon Hot Spray Paint actually build a thicker paint film than five coats of conventional paint! Not only a thicker paint film but a better paint film—with protection lasting up to twice as long.

Tygon Hot Spray Paint can save as much as 30% in paint labor costs. Saves on material costs, too. No expensive thinners—heat does the thinning. Hot spraying cuts wasteful overspray—stops wet spray drift.

A ADHESION
T THICKNESS
D DENSITY

Write Today for Bulletin ATD-34
Address Dept. NED555

U. S. STONEWARE CO.
PLASTICS & SYNTHETICS DIVISION
AKRON 9, OHIO

58E

▲ For more details circle NED-962 E5 on enclosed inquiry slip ▲

there's almost no end of applications for... Abart SPEED REDUCERS

CONVEYORS
STOKERS • DISHWASHERS • FANS • BLOWERS
COMPRESSORS • AGITATORS • MIXERS
SPRAYERS • TURNTABLES • ELEVATORS
HOISTS • ESCALATORS
ROTARY KILNS • GRINDERS
CRUSHERS • LINE SHAFTS
MACHINE TOOLS
ORE ROASTERS
WATER SCREWS
CALENDERS

COMPACT • EFFICIENT
LONG LASTING • TROUBLE FREE

Abart Speed Reducers are available in over 75 types and sizes—spur, worm, and combination—ratings from 1.50 to 168 hp., with ratios up to 10,000 to 1. Specials to order.

Send for free data-packed, pocket-size Abart Catalog.

ABART GEAR and MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears and Speed Reducers • *Bishop 2-2524*

▲ For more details circle NED-963 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

Slotted Angle Construction Method

Flowstrut Corp.—The "universal slotted angle system" for simplified construction of anything from workbenches to warehouses is explained in 6-page folder of this title. Basic components of system are slotted steel angle bars of 14-gage steel which can be bolted together in endless number of combinations. They are predrilled—40 holes per foot—with cut marks at ¾-in. intervals.

▲ For more details circle NED-964 E5 on enclosed inquiry slip ▲

Air-Conditioning Cooling Towers

Halstead & Mitchell—A wealth of new material on cooling towers used with air compressors is contained in 16-page catalog WT & CT-583. It presents operating characteristics, specifications and installation data for 20 cooling towers ranging from 5 through 60-ton capacity. Catalog also discusses vinsynite, vinyl zinc and chlorinated rubber coatings applied to tower cabinets.

▲ For more details circle NED-965 E5 on enclosed inquiry slip ▲

Hardness Tester

Gries Industries, Inc., Testing Machines Div.—Details concerning load application, optical equipment and test procedure for Micro-Reflex hardness tester designed for loads from 10 to 3000 grams are found in bulletin A-16. Application for this apparatus includes testing of hard layers below 0.004-in. thickness, very thin metal sheets and foils, small highly stressed parts, layers of metal plating and edges of precision tools.

▲ For more details circle NED-966 E5 on enclosed inquiry slip ▲

Free Lens Tissue

Aldine Paper Co.—Offered free as a demonstration of one of the many types of special papers that can be engineered to specific needs, sample of lens tissues is contained in convenient folder-dispenser. Rayon fiber is basic raw material of this treated cleaning tissue. Company offers complete engineering and production service in the field of papers and replacement fabrics for all purposes.

▲ For more details circle NED-967 E5 on enclosed inquiry slip ▲

Laminated & Molded Plastics

Richardson Co.—More than 35 different types and grades of Insurok laminated plastics and molded plastics are described in 12-page illustrated bulletin. Grades of plastics are listed by properties and according to various standard specifications. Typical applications using sheets, rods and tubes as well as suggested techniques for drilling, sawing, tapping, shearing, turning, planing and punching are pictured and discussed. Copper-clad laminates for printed circuit applications are covered.

▲ For more details circle NED-968 E5 on enclosed inquiry slip ▲

Stamping Facilities

Ledkote Products Co., Aircraft Div.—Recent equipment additions and expanded facilities of this company for the production of drop hammer titanium, magnesium and high-alloy steel aircraft stampings are subject of illustrated "Facilities" booklet.

▲ For more details circle NED-969 E5 on enclosed inquiry slip ▲

Packaging Guidance

United States Steel Corp., Gerrard Steel Strapping Div.—"Blue Book of Packaging" is a 36-page treatise on the advantages and uses of steel strapping for all types of packaging purposes. Technical data are given on both round and flat steel strapping, and wide range of application tools is described.

▲ For more details circle NED-970 E5 on enclosed inquiry slip ▲

Electric Control Valves

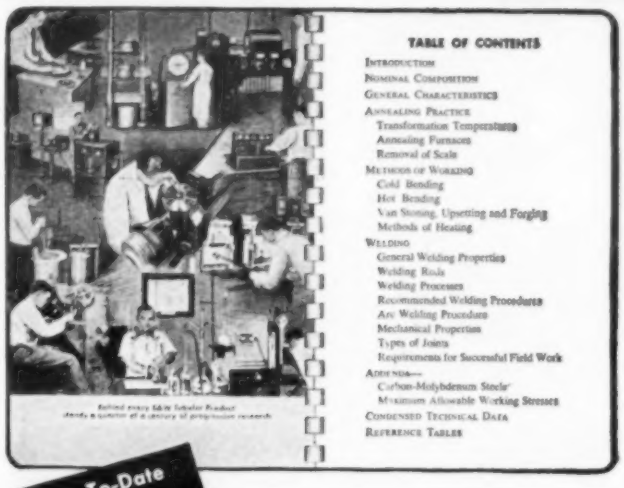
Skinner Chuck Co., Skinner Electric Valve Div.—Five basic electric valves and their possible variations are subject of illustrated general catalog "Skinner Electric Valves." Written in nontechnical language, catalog is cross-indexed for quick reference.

▲ For more details circle NED-971 E5 on enclosed inquiry slip ▲

Filtration News

Pall Filtration Cos.—Series of regularly-issued news bulletins is now being published bi-monthly to present the latest news and developments and applications of porous filter media and engineering. Bulletin will be sent regularly to research, design, development and process engineers and others in the process industries.

▲ For more details circle NED-972 E5 on enclosed inquiry slip ▲



Up-To-Date Practical Information

On How To Handle B&W Intermediate Croloys

New, revised edition of Technical Bulletin 9. Contains latest data on methods of working seamless tubing and pipe of the popular intermediate chromium molybdenum alloys. Send for your copy today.

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa. and Milwaukee, Wis.: Seamless Tubing, Welded Stainless Steel Tubing
Alliance, Ohio: Welded Carbon Steel Tubing
Milwaukee, Wis.: Seamless Welding Fittings
TA-5025(LP)

▲ For more details circle NED-973 E5 on enclosed inquiry slip ▲

T&B ENGINEERED

watertight service entrance cable connectors

NOW with Neoprene bushings

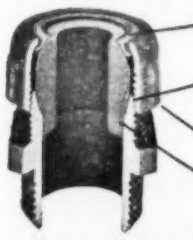
• FIT DOUBLE RANGE OF CABLE SIZES
• CODED IN 5 BRIGHT COLORS

That's right, T&B SEC connectors now have Neoprene bushings to accommodate a wide range of cable sizes . . . last longer, too. You need stock only one-half your usual inventory.

And they're *double* color-coded! First, 5 Neoprene bushing colors give at-a-glance size identification even after installation. Second, push-out paper discs in same colors are imprinted with catalog numbers and cable size.

Available in hex-gland and two-screw types . . . for complete range of service entrance cables.

T41



1. Brass retaining ring minimizes tightening friction . . . *prevents cable twisting.*
2. Bushing and body both tapered give double amount of take-up . . . assure positive, *watertight* seal on wide *range of cable sizes.*
3. Tabolite-finished steel gland nut . . . *rustproof* die cast zinc alloy body.
4. Color-coded neoprene sealing bushing . . . *unaffected by oil, sunlight, or chemicals.*

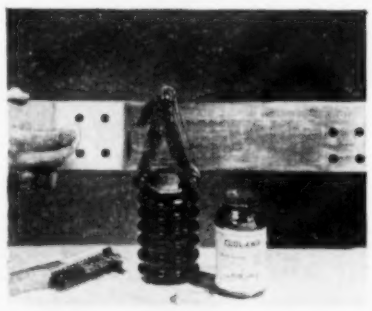
THE THOMAS & BETTS CO.
Incorporated
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

▲ For more details circle NED-974 E5 on enclosed inquiry slip ▲

GENUINE — SIMPLE

SILVER PLATING

"ON THE JOB" WITH POWDER



Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool-Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready to use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND SHIPPED PREPAID
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS
GENUINE • SIMPLE SILVER PLATING

The COOL-AMP Co.
Dept. ED, 8603 S. W. 17th Avenue, Portland 19, Oregon

▲ For more details circle NED-975 E5 on enclosed inquiry slip ▲

Here's how we

SAVE ON RAILS

BUY "GUARANTEED RELAYERS"

Handle more cars better — spend less to install and maintain with Relayers from Foster. "Open-stock" shipments from Foster warehouses, all sections 12# thru 175#—plus Switch Materials and Track items.

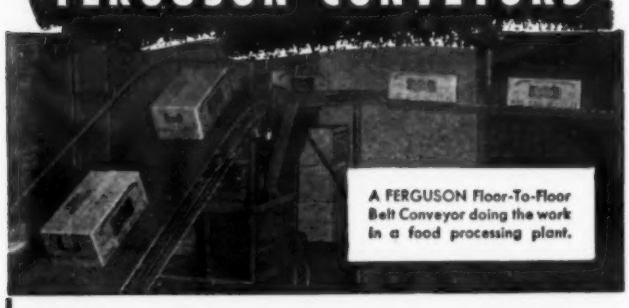
Send catalogs ☐ Rails ☐ Track Equipment
☐ Send Free 'Track Maintenance' Book NE5

RAILS · TRACK EQUIPMENT · PIPE · PIPE FABRICATION · PILING

L.B. FOSTER CO.
PITTSBURGH 30 • NEW YORK 7 • CHICAGO 4 • HOUSTON 2 • LOS ANGELES 5

▲ For more details circle NED-976 E5 on enclosed inquiry slip ▲

LEAVE YOUR MATERIALS HANDLING TO FERGUSON CONVEYORS



A FERGUSON Floor-To-Floor Belt Conveyor doing the work in a food processing plant.

You can free people in your plant for profitable work if you leave materials handling to FERGUSON CONVEYORS. Parts, products, packages will get there faster, safer, easier because these conveyors move material more directly, bypass bottlenecks, reduce floor traffic, stop the clutter that wastes efficiency.

Efficient materials handling users constantly reorder FERGUSON power, roller and wheel conveyors because they get such a big return on their investment. Write, wire or call for more information.

HARRY J. Ferguson COMPANY
133 WEST AVE., JENKINTOWN, PA.
Turner 4-4401

▲ For more details circle NED-977 E5 on enclosed inquiry slip ▲

NEW Screw Machine Has 6 Radically New Features

This really different, completely new single spindle automatic screw machine offers you these 6 really new features:

1. Three pre-set independent cutting speeds; adjustable and reversible.
2. A three-position crank permits long, medium, and short work to be produced with equal efficiency.
3. Heavy section cross slides and direct cam activation assure closest forming tolerances.
4. Lead cam is fully visible, easily accessible. Open front and large tooling space simplify tool set-ups and operation.
5. Sturdy, one-piece, cabinet type construction. High walls give protection against oil splash.
6. Large, deep, open-end chip well permits cleaning during operation. Overload safety throw-out is handy at end of turret unit.

NOW ON DISPLAY — Write for name of nearest dealer. Send for Latest Literature

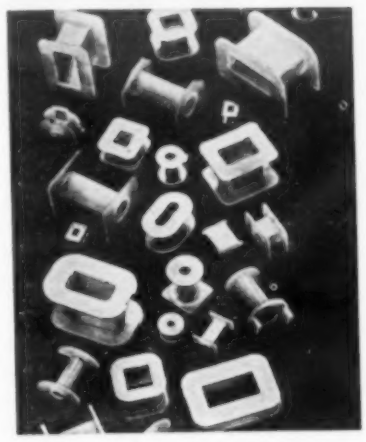
A Product of
THE GEAR GRINDING MACHINE COMPANY
3925 Christopher • Detroit 11, Michigan

DETROIT Screw Matic 750

▲ For more details circle NED-978 E5 on enclosed inquiry slip ▲

New Processes & Materials

PLASTIC COIL FORMS offered in acetate or nylon



Auto-Molded thermoplastic bobbins are produced automatically in self-extinguishing acetate for average temperatures and in nylon for higher temperature ranges. They feature relatively low tooling costs which do not exceed $400. Bobbins or coil forms are available with ¼ to 1½ - in. core lengths, 1½ x 1½-in. maximum core sizes and 2 x 2¾-in. maximum flange sizes. Terminal designs eliminate need for secondary operations. Bobbins have secure flanges, dimensional stability, maximum usable winding space and transparency for visual inspection. Made by **Cosmo Plastics Co.**, 3240 W. Fourteenth St., Cleveland 9, O.

▲ For more details circle NED-979 E5 on enclosed inquiry slip ▲

CARBON GRAPHITE MATERIAL for thermal, electro-mechanical use

Made in various combinations of graphite and other forms of carbon, Karak carbon-graphite finds use in thermal, mechanical and electro-mechanical applications. It is available in grades for use as bearings, rings, molds, cores and liquid seals, and can be used in steam turbines, torque converters, diesel engines, air compressors and meters for water and other fluids. Combinations can be made impervious up to limited temperatures. Karak products are molded and machined in variety of shapes to specification. Density, hardness, material strength and frictional properties are among principal characteristics. Made by **Ohio Carbon Co.**, 12500 Berea Rd., Cleveland 11, O.

▲ For more details circle NED-980 E5 on enclosed inquiry slip ▲

FLOOR PATCHING MATERIAL for indoor and outdoor use

Jet-Roc ready-mixed floor patching material can be subjected to heavy factory traffic immediately after application. It is suitable for use in repairing concrete, brick, mastic or composition surfaces, either indoors or outdoors. Application consists of priming the floor hole, filling with Jet-Roc as it comes from the package, and tamping and rolling. Material is resistant to oil, gasoline, grease, milk, water, soap and many acids and is skidproof and easy to clean. Packaging is in 5-gal cans and 30 and 55-gal drums. Made by **Medal Brick & Tile Co.**, Dept. W-1, Wooster, O.

▲ For more details circle NED-981 E5 on enclosed inquiry slip ▲

BRAZING FLUX withstands 1400 to 1600° F heating

Developed for silver alloy brazing of stainless, chromium heat-resisting alloys, chromium and tungsten carbides, Special Handy Flux type B-1 reduces oxides of the refractory metals while protecting underlying metal from further oxidation during brazing. Flux can withstand heating at 1400-1600° F for short periods. It contains a strong deoxidizer, one whose oxide is a flux former. In a sense, flux regenerates itself during heating cycle, providing the longer activity span required for elevated temperatures. After brazing, flux can be removed readily with hot water. It can be used with AMA 4772 brazing alloy, flow point 1515° F, for brazing jet engine compressor blades and for attachment of chromium carbide and tungsten carbide tool tips. Made by **Handy & Harman**, 82 Fulton St., New York 38, N. Y.

▲ For more details circle NED-982 E5 on enclosed inquiry slip ▲

Quickly, Easily with a
DI-ACRO* NOTCHER

Speed up notching operations, eliminate the need for heavy presses and dies. A 6"x6" notch is made in 16 gauge material in one operation. Also perform many shearing jobs.

NEW DI-ACRO POWER NOTCHER

Especially designed for operations where a high rate of production must be maintained. Motor driven flywheel and all moving parts housed in welded steel cabinet.

WANT MORE INFORMATION?
Send for 32-Page Catalog
*pronounced DIE-ACK-RO
Creators of "DIE-LESS DUPLICATING"

O'NEIL-IRWIN MANUFACTURING CO.
354 8th Avenue, Lake City, Minn.

di-acro PRECISION METALWORKING MACHINES

▲ For more details circle NED-983 E5 on enclosed inquiry slip ▲

NEW!
NATIONAL ELECTRIC

"XDUCT"
RIGID STEEL
ELECTRICAL CONDUIT

NEW ON THE INSIDE . . .
NEW ON THE OUTSIDE

EASY FISHING—"XDUCT's" new aluminum enamel inside coating provides minimum friction between conduit wall and wire.

SUPERIOR CORROSION RESISTANCE—National Electric's revolutionary new patented electrogalvanizing process deposits pure zinc *uniformly* over entire outside surface, *including the threads.*

THREAD PROTECTION—Sharp, clean threads of "XDUCT" rigid steel conduit are machined *before* galvanizing . . . assure complete protection from end to end.

SUPERIOR BENDING—High ductile steel used to assure easy bending.

DESIRABLE COLOR—Silvery color is highly acceptable for installation in exposed locations.

National Electric Products
PITTSBURGH PA.
3 Plants • 10 Warehouses • 36 Sales Offices
Listed by Underwriters' Laboratories, Inc.

National Electric Products Corporation
2 Gateway Center, Pittsburgh 22, Pa.
Please send information on the NEW National Electric XDUCT Conduit.
Name
Company
Business
Address
City State

▲ For more details circle NED-984 E5 on enclosed inquiry slip ▲

HARDINGE
ELMIRA, N.Y.

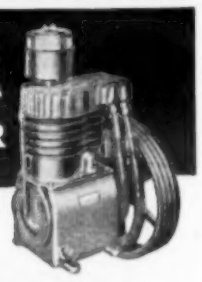
COLLETS and FEED FINGERS
PERFORMANCE... ECONOMY

Collets and Feed Fingers for all makes of Automatics, Chucking Machines and Turret Lathes through a **single** source of supply. Get the benefit of more than **65** years of manufacturing experience—specify HARDINGE Collets and Feed Fingers.

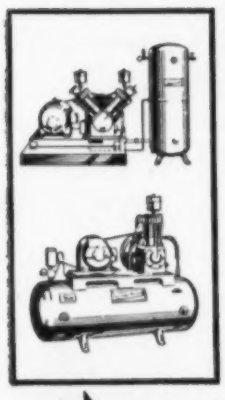
HARDINGE BROTHERS, INC., ELMIRA, N. Y.

▲ For more details circle NED-985 E5 on enclosed inquiry slip ▲

MORE FREE AIR
PER HORSEPOWER



Kellogg-American



AIR COMPRESSOR PUMPS, ⅓ TO 20 HP
Engineered and precision built to give more *free air* (actual air delivered) per hp, Kellogg-American compressors assure maximum air delivery, efficiency and service life. Single or two stage, 1, 2 or 4-cylinder units available for pressures up to 200 psi; displacements to 105.9 c. f. m.

COMPLETE AIR COMPRESSORS, ⅓ TO 20 HP
Portable or stationary; skid, remote tank or tank mounted; electric motor or gas-engine-driven models permit you to select the most efficient, economical compressor for every job. Write Dept. ND-1 for Bulletin K-307.

FREE New slip-stick selector to help determine the right Kellogg-American air compressors for your needs. Send for yours on company letterhead today.

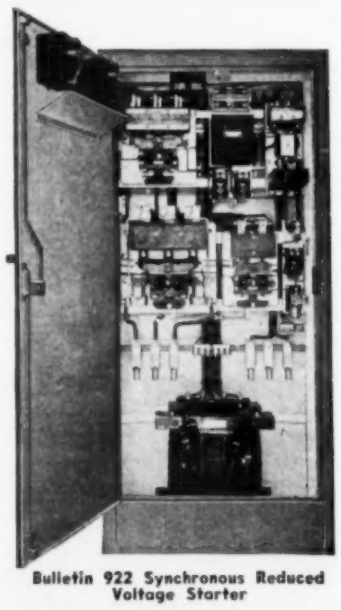
KELLOGG DIVISION
ROCHESTER 9, N. Y.

AMERICAN Brake Shoe COMPANY
Kellogg-American
⅓-20 H P AIR COMPRESSORS PAINT SPRAY EQUIPMENT

▲ For more details circle NED-986 E5 on enclosed inquiry slip ▲

STARTERS
for BIG MOTORS

This automatic reduced voltage autotransformer starter is typical of the big starters in the Allen-Bradley line, listed up to 700 hp, 2000 v to 4600 v. Send for the 120-page Handy Catalog, today.



Bulletin 922 Synchronous Reduced Voltage Starter

A-B Quality
The Sign of QUALITY Motor Control

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada—Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▲ For more details circle NED-987 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

Broach Design & Use

American Broach & Machine Co.—36-page illustrated catalog 450 deals with available types of internal and surface broaches, keyway tools and broach pullers. Guidance is provided in the resharpening and care of broaches. Second section discusses broaching machines, internal and surface broaching operations, and indexing fixtures.

▲ For more details circle NED-988 E5 on enclosed inquiry slip ▲

Insulating Sheet Material

Johns-Manville — "Marinite for Driers, Ovens, Breechings and Housings" is a 16-page illustrated booklet offering information on a structurally strong sheet material which both builds and insulates. Handling and working recommendations, construction and fabrication suggestions, data on physical and thermal properties and application photos are included.

▲ For more details circle NED-989 E5 on enclosed inquiry slip ▲

Silver Alloy Brazing

Air Reduction Sales Co.—24-page illustrated "Brazing Manual" deals with application of major brazing methods in joining metals using silver alloys and filler metals, fluxes and gas atmospheres. Over 20 tables, drawings and photos are used in discussing silver brazing procedure, selection of brazing and filler metals, design of brazed joints, prebraze cleaning and assembly of brazed joints.

▲ For more details circle NED-990 E5 on enclosed inquiry slip ▲

Stainless Steel Filters

Micro Metallic Corp.—Stocked porous stainless steel filters for pressures up to 10,000 psi are subject of 4-page illustrated bulletin 213. Prices and engineering data are included. Choice of filter area, porosity, pressure ranges, pipeline fittings and element spacing is offered. How to specify nonstock filters to suit particular gas or liquid needs is covered.

▲ For more details circle NED-991 E5 on enclosed inquiry slip ▲

Cycling Timers

R. W. Cramer Co.—Timers designed to repeat a definite time cycle or sequence continuously are detailed in an 8-page illustrated bulletin, identified as PB-150. Program, percentage and pulse timer types are covered. Time ratings and ranges available, wiring diagrams, dimensions and special housings data are included.

▲ For more details circle NED-992 E5 on enclosed inquiry slip ▲

Wiring for Home & Industry

Rodale Mfg. Co.—48-page illustrated 1955 catalog shows more than 600 products and electrical wiring devices for home, industry and commercial buildings. Thumb-spot product finder simplifies selection of specific wiring devices.

▲ For more details circle NED-993 E5 on enclosed inquiry slip ▲

Snap-Ring Groove Gage

Mueller Laboratory—Designed for use in instrument, aircraft, manufacturing, hydraulic, oil tool and related industries, the Mueller precision undercut measurement gage facilitates accurate checking of snap-ring grooves. Described in 6-page illustrated folder, gage has range of 0.187 to 2.25 in. by merely changing the measuring tips.

▲ For more details circle NED-994 E5 on enclosed inquiry slip ▲

Electronic Timers

G. C. Wilson & Co.—Details of a standard line of electronic timers are presented in 5-page illustrated folder. Included in line are delay, repeat cycle and interval timers, all of which are available from stock.

▲ For more details circle NED-995 E5 on enclosed inquiry slip ▲

Machinist & Automotive Tools

Fairmont Tool & Forging, Inc.—Line of machinist and automotive wrenches and hammers is described in 74-page illustrated catalog No. 500. In addition, company's facilities for designing and producing original equipment tools and kits, as well as industrial forgings, are outlined.

▲ For more details circle NED-996 E5 on enclosed inquiry slip ▲

Steel Heat Treatment

Ajax Electric Co.—"The Present Status of Austempering and Martempering" is title of technical bulletin 500 written by metallurgist Q. D. Mehrkam. Tables and illustrations clarify the text which is written for metalworking executives and production men.

▲ For more details circle NED-997 E5 on enclosed inquiry slip ▲

here's what DIE CAST
GRC ZINC ALLOY THREADED
FASTENINGS
mean to you...

in terms of a better product, in terms of a more economical product!
Gries' unique techniques make possible closer tolerances, cleaner threads, greater dependability, durability, die-cast uniformity. Mass production means lower costs!

NEW BULLETIN AVAILABLE!
Fact-packed — shows how Gries ingenuity and money-saving methods can solve your fastenings problems.
Send today for your copy, prices and samples.

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y. Phone: NEw Rochelle 3-8600

▲ For more details circle NED-998 E5 on enclosed inquiry slip ▲

SPRAYING SYSTEMS CO.
SPRAY NOZZLES

exact performance, for every need
Choice of thousands of standard spray nozzles gives you exact spray pattern, capacity, impact and atomization. PROMPT . . . often immediate delivery from stock.

BE SURE TO WRITE FOR . . . . . the most complete spray nozzle catalog ever printed . . . forty-eight pages of detailed information. Write for your free copy of Catalog No 24.

SPRAYING SYSTEMS CO.
3211 Randolph Street • Bellwood, Illinois

▲ For more details circle NED-999 E5 on enclosed inquiry slip ▲

SEALINE
"HAND SEALER"

For Polyethylene Pliofilm
and other thermo-plastic films
SEALS BAGS, PACKAGES

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Ideal for short runs—test work—laboratories—production lines.

- For fast, flat sealing—straight or irregular shapes.
- Seals direct—no intermediate material required.
- Accurate adjustable heat control—200° to 450° F.
- Easy to handle—weighs less than 1 lb.

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4720 W. Lake Street, Chicago 44, Illinois

▲ For more details circle NED-1000 E5 on enclosed inquiry slip ▲

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of the desired items. Your request will be forwarded promptly to the manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151
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E-5

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

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Penton Building
CLEVELAND 13, OHIO

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Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

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New Processes & Materials

PLASTIC DISPERSIONS
chemically inert, resist high heat

Kel-F plastic dispersions, applied by spraying, dipping or spreading on a wide variety of metallic and nonmetallic surfaces, are chemically inert and resist high temperatures. They have a high gloss and will not contaminate products with which they come in contact. Properties include resistance to temperatures approaching 400° F, low temperature flexibility, resistance to chemicals, high abrasion resistance and tensile strength, low cold flow, high dielectric strength, and nontoxic and nonsticking characteristics. Dispersions consist of finely divided particles of 1 to 20-micron size, suspended in volatile organic liquids. Types for spray and spread, flow or dip coating are available. Potential uses include coating of tanks, pipe lines, pumps, mixers, valves, flowmeters, shipping containers, guide rolls, casting molds, hoppers and transformers. Made by **M. W. Kellogg Co.**, 4 Barclay St., New York, N. Y.

▲ For more details circle **NED-1001 E5** on enclosed inquiry slip ▲

CONCRETE SURFACE PROTECTION
three products combined to provide acid-resisting surface

Trenches, tank bases and other concrete surfaces can be protected against effects of perchlorethylene and hydrochloric acid spillage by combination of three Ceilcote materials. Surface is coated with 1/8-in. of Ceilcrete B, a plastic-base thermosetting coating, then shale brick is set in Corobond resin cement. This provides impervious monolithic surface.

Corobond, featuring qualities of workability, chemical and thermal resistance, hardens to dense material of high mechanical strength. Ceilcrete B, a trowelled-on acidproof coating, hardens into stone-like material chemically equal to acidproof brick. Photo shows test panels, one coated with Ceilcrete and the other with bituminous membrane, submerged 15 minutes in perchlorethylene. Ceilcrete-coated panel will resist this acid indefinitely. Developed by **Ceilcote Co.**, 4838 Ridge Rd., Cleveland 9, O.

▲ For more details circle **NED-1002 E5** on enclosed inquiry slip ▲

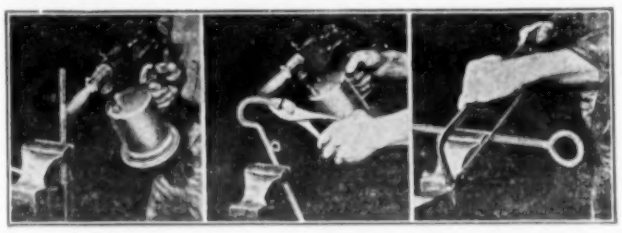
SAFETY TOP COATING
for wood, concrete or steel floors

A resilient nonslip top coating can be applied over wood, concrete, steel, tile or mastic floors and surfaces using Carbo - Tread J-174-E. Product is fine-grained, ready-mixed compound which is troweled into place and is ready for traffic in 24 hours. It sets by both dehydration and compression, producing a smooth, light gray colored surface. Compound is available in 5-gal cans and 30-gal and 50-gal drums. Made by **Maintenance Inc.**, Dept. W-7, Wooster, O.

▲ For more details circle **NED-1004 E5** on enclosed inquiry slip ▲

THREADED STEEL RODS
13 diameters, 2 lengths offered

Source of inexpensive custom studs, bolts and hangers is provided by expanded line of Redi-Bolt continuous threaded steel rods (*NED—May* '52). They can be



cut to desired length and used with standard nuts. Special shapes can be made by heating and bending. Thirteen diameters from 3/16 to 1½ in. and 24 and 36-in. standard lengths are available with Standard National Coarse or SAE (National Fine) threads. Other lengths from 1 to 144 in. can be ordered. All have a rust resistant finish. Made by **Redi-Bolt, Inc.**, Dept. R-5312, 5334 Indianapolis Blvd., East Chicago, Ind.

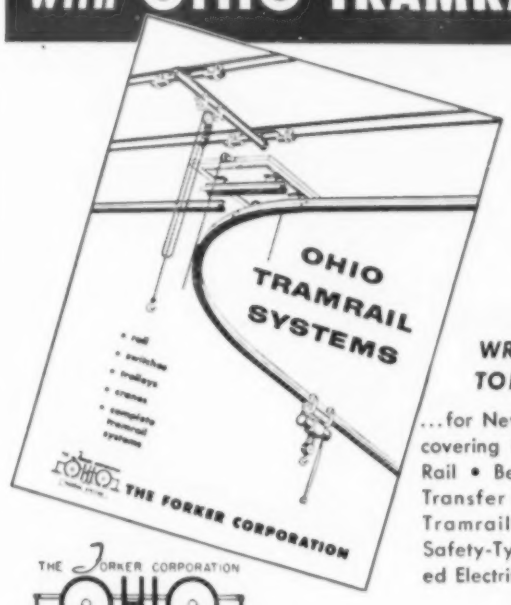
▲ For more details circle **NED-1005 E5** on enclosed inquiry slip ▲

Vibration Absorbing Material

The advertisement on Vibracork vibration absorbing material which cushions vibrations from hydraulic presses, pumps, compressors and many other types of machinery and equipment was erroneously omitted from the "Product Index" of the April 1955 issue. This ad appeared on page 36. It described a resilient machinery isolation cork plate which is available in 12 x 36-in. sheets in 2 and 3-in. thick standard density and 1, 2 and 3-in. thick heavy density grades for loads up to 8500 lb per sq ft. Available from **Korfund Co.**, 48-35P Thirty-Second Place, Long Island City 1, N. Y.

▲ For more details circle **NED-1006 E5** on enclosed inquiry slip ▲

See why...
IT PAYS TO GO OVERHEAD with OHIO TRAMRAIL



WRITE TODAY
...for New Catalog covering Ohio Tee-Rail • Beam Rail • Transfer Bridges • Tramrail Cranes • Safety-Type Shielded Electrification.

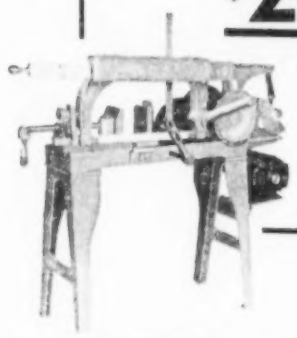
THE FORKER CORPORATION OHIO TRAMRAIL SYSTEMS

THE FORKER CORPORATION
2044 RANDOM ROAD CLEVELAND 6, OHIO

▲ For more details circle **NED-1008 E5** on enclosed inquiry slip ▲

IN A CLASS BY ITSELF!

This No. 3-B
KELLER *Power* HACK SAW
is second to none in performance!
only
$205.76
less motor fob Eau Claire, Wisc.



No. 3-B KELLER DRY CUT
with automatic lift and automatic stop

CAPACITY
6¼" x 6¼"

Write for catalog with specifications and low prices today.

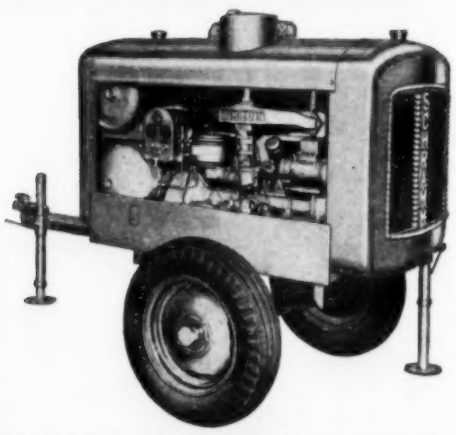
MOST POPULAR among the 10 standard Keller Power Hack Saws is the Model 3-B. A real heavy duty work horse in the hack saw field with plenty of capacity and all of the features you need to cut fast. . . accurately. . .and at low cost. Only $205.76 less motor; $224.00 with motor f.o.b. Eau Claire, Wisc. Completely wired, ready to plug in and use.

Ask about the other Keller Power Hack Saws. . .5 capacities 4" x 4"; 5" x 5"; 6¾" x 6¾"; 7" x 7" and 9" x 9". . .and the low prices!

SALES SERVICE MACHINE TOOL CO.
2365 University Avenue • St. Paul 14, Minn.

▲ For more details circle **NED-1009 E5** on enclosed inquiry slip ▲

The SCHRAMM "75"



A New Engine—A New Compressor
. . . NOT A SPEEDED-UP 60

- Designed for long continuous service with low maintenance
- Water cooled
- 12 volt push-button starting
- Delivers more than 75 c.f.m. @ 100 p.s.i.

SEND FOR CATALOG 5501-75
SCHRAMM, INC.
WEST CHESTER • PENNSYLVANIA
SCHRAMMAIR YOUR JOBS

▲ For more details circle **NED-1003 E5** on enclosed inquiry slip ▲

Superior TITANIUM TUBING
STRAIGHTENED IN ONE PASS
THRU MACK-HEMP GUIDELESS ROTARY STRAIGHTENERS

Titanium tubing, combining light weight and high strength, is considerably more difficult to straighten than some other types of metal tubing, due to its tendency to gall or seize when being worked with other metals. In spite of these characteristics, Superior Tube Company straightens thousands of feet of Titanium tubing in one pass thru its Mack-Hemp Straighteners.

Moreover, these Mack-Hemp Rotary Straighteners help to improve production of Superior Titanium Tubing in other ways:

- less work-hardening of the tubing results
- better product finish
- speed on large production runs

These same Straighteners are also used for straightening Superior's stainless, alloy and carbon steel tubing. In fact, Mack-Hemp guideless Rotary Straighteners are successfully used in all kinds of ferrous and non-ferrous tubing manufacturing. So, if you have tube straightening problems—no matter what type metal tubing—get in touch with Mack-Hemp for a helpful discussion or write for Technical Bulletin #55—"How to Straighten Pipe and Tube."

MACKINTOSH-HEMPHILL DIVISION PITTSBURGH U.S.A. BLISS

MACKINTOSH-HEMPHILL
DIVISION OF E.W. BLISS COMPANY
Makers of the rolls with the striped red wabblers
PITTSBURGH AND MIDLAND, PA.

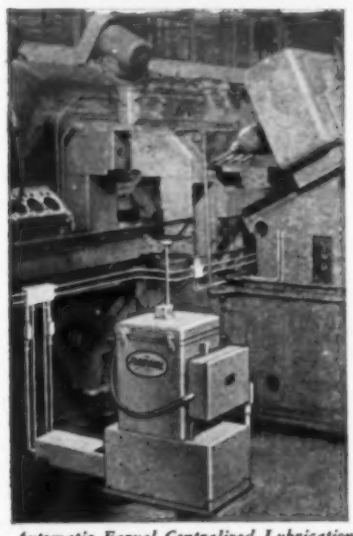
Two Mack-Hemp AXY Straighteners straighten Titanium tubing to tolerances closer than commercial specifications, in sizes up to 1¼" O.D., at Superior Tube Company, Norristown, Pa.

I would like to have a copy of Bulletin #55 giving case histories and detailed information on Mack-Hemp guideless Rotary Straighteners.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle **NED-1007 E5** on enclosed inquiry slip ▲

LUBRICATES WHILE MACHINE OPERATES



Automatic Farval Centralized Lubrication System as installed on engine block automatic tapping machines.

Automatic Farval System Protects Bearings, Cuts Costs

Farval is a simple, practical system of centralized lubrication that operates *without* machine shutdown. It delivers oil or grease to each bearing served, from one central pumping station, in the exact amount *when* required. Ends faulty lubrication, saves bearings, cuts maintenance, saves time. Automatic or manual operation. Can be installed on old or new equipment. Write for Bulletin 26.

THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio
Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

▲ For more details circle NED-1010 E5 on enclosed inquiry slip ▲

New products developed by
GUARDIAN
in step with today's electronic designs

This Guardian Series 805 is a 32-pole relay. It can simultaneously connect 32 circuits. Thermosetting phenolic contact blades. All contacting members enclosed in aluminum cover. Wt. 5 oz.

Series 805

Series 2005 is 6 P.D.T. hermetically sealed, 5 amp. sub-miniature relay. Meets MIL-R-6106-A and MIL-R-5757-B. Withstands 100 G shock; 10 G vibration at 75 to 2000 cyc. Wt. 4.25 oz.

Series 2005

Write for NEW GUARDIAN CATALOG NO. 11

GUARDIAN ELECTRIC
1626-F W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

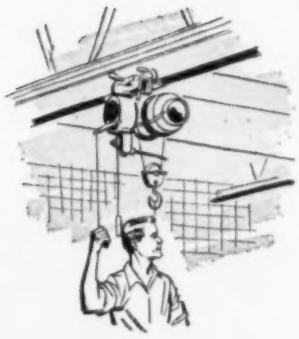
▲ For more details circle NED-1011 E5 on enclosed inquiry slip ▲

COBURN

OVERHEAD CONVEYING EQUIPMENT

Save money... Install it yourself.

Here are the simple ABC's of Coburn's easy and inexpensive installation.



(A) Our engineers make a study of your particular plant layout.

(B) Easy-to-follow plans are then submitted.

(C) These plans, plus Coburn's simplicity of parts and design enable your own plant personnel to set up your overhead conveying system quickly and economically.

Write for Catalog #220 to Coburn Sales and Engineering, 56 Sterling Street, Clinton, Mass.

2598

COBURN PRODUCTS
PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

▲ For more details circle NED-1012 E5 on enclosed inquiry slip ▲

New Literature & Catalogs

Packaging Pads & Blankets

Jet-Pak Inc.—Highlights of the varied applications of Jet-Pak all-purpose cushioned pads and blankets where shock, abrasion, marring, freezing or dust presents a shipping or warehousing problem are presented in illustrated catalog. Economical stock sizes of this flexible padding and wrapping material range from widths of 4 to 30 in. and lengths from 12 to 96 in.

▲ For more details circle NED-1013 E5 on enclosed inquiry slip ▲

Alloy Chain & Slings

McKay Co.—Illustrated 8-page bulletin AA gives specifications of McKay-U-Loy basic chain and single, double, triple and quadruple branch slings as well as sling, grab and foundry hooks. Tips are given on chain care. Chain is particularly suited for service at temperature up to 1000° F. Reference charts indicate the attachments to use and loads which can be lifted safely with various slings.

▲ For more details circle NED-1014 E5 on enclosed inquiry slip ▲

Air Control Valves

Airmatic Valve, Inc.—66-page illustrated catalog "Air Control Valves" gives data on complete line of two, three and four-way air control valves for high and low pressure service. Among types described are cam, flow control, foot, hand, interlocking, pilot, pressure regulator, quick exhaust, sequence, solenoid and time delay. Also detailed are single and double-acting cylinders for air or hydraulic use and pipeline strainers.

▲ For more details circle NED-1015 E5 on enclosed inquiry slip ▲

Pneumatic Bar Feed Machine

Lipe-Rollway Corp.—"Time, the Important Fourth Dimension of Production and Profits" is 24-page booklet which demonstrates how the A.M.L. pneumatic bar feed, by keeping pace with time, feeds bar stock continuously for periods up to 8 hours. Machine will feed single spindle screw machines, turret lathes, centerless grinders, abrasive-wheel cut-offs, punch presses, cold headers, die machines and other equipment.

▲ For more details circle NED-1016 E5 on enclosed inquiry slip ▲

Industrial Safety Equipment

Willson Products, Inc.—64-page easy-to-read, fully illustrated general catalog on industrial safety equipment is designed as a workable, everyday safety manual. Major sections cover eye, head and respiratory protection; welding; air analysis apparatus; and maintenance products. All items are effectively pictured and described, and ordering information is provided.

▲ For more details circle NED-1017 E5 on enclosed inquiry slip ▲

Reinforced Plastic Tooling

Marblette Corp.—"A Manual for Reinforced Plastics Tooling" is 20-page technical guide which describes fabrication and indicates the uses of plastic tools. These include spotting racks, checking and inspection fixtures, welding and assembly fixtures, duplicate die models, drill and trimming fixtures and matrices made from thermosetting resins strengthened with glass fibers.

▲ For more details circle NED-1018 E5 on enclosed inquiry slip ▲

Hydraulic Control Valves

Barksdale Valves—Comic-book sequence in 12-page booklet entitled "Super Seal" explains principle employed in line of quarter-turn valves for hydraulic applications. Inside back cover contains cut-out working models and a cross section which further dramatizes Shear-Seal principle.

▲ For more details circle NED-1019 E5 on enclosed inquiry slip ▲

Wood Screws

Southern Screw Co.—16-page catalog WS-1 contains prices for extensive line of Phillips and slotted wood screws with flat, round and oval heads. They are available in steel, brass, silicon bronze, stainless steel, aluminum and with various plated finishes. Also listed are drive, knob and dowel screws and hanger and carriage bolts.

▲ For more details circle NED-1020 E5 on enclosed inquiry slip ▲

Press Brakes & Dies

Service Machine Co.—8-page illustrated folder presents specifications on Semco steel press brakes. Also described are forged steel press brake dies up to 12 ft in size.

▲ For more details circle NED-1021 E5 on enclosed inquiry slip ▲

Chop!
Chop!
GOES YOUR PRODUCTION COSTS

If you use
QUALITY CONTROLLED
"SUPERIOR"
ABRASIVE DISCS

Prove to yourself that they offer
LOWEST PRICE
HIGHEST QUALITY
FASTEST CUTTING
LONGEST LIFE

100% RESIN

A Superior Disc for A Happier Operator

100 Years of Know How

MANUFACTURED BY
STANDARD ABRASIVES CO.
27 MAPLE STREET • HOLBROOK, MASS.

▲ For more details circle NED-1022 E5 on enclosed inquiry slip ▲

LEXCO HYDRAULIC LIFT TABLES

save *money, time and energy*

Lift heavy castings, dies, machine accessories and other heavy articles—Use as adjustable work bench—Welder's positioning table—Leveling Table for Presses, conveyors, loading trucks, etc. Many other uses too numerous to mention.

- A new specially engineered method to give hydraulic power and ease. Table capacity 2000 lbs.—Hydraulic unit 3000 lbs.
- Table is 30" long by 20" wide by 30" overall height with an 18" raise to 48" overall height—hand pumped—¼" per stroke. Lowered fast or slow with simple release valve.
- Equipped with floor lock to anchor truck in position; controlled by foot pedal, toe release.
- Mounted on Two 5" rigid casters and two 5" swivel casters. All casters with bearings in axles.
- A safety first item to eliminate fractured limbs and strained muscles.

list **$169** f.o.b Lansdale, Pa. *Distributorships available.*

LEXCO ENGINEERING & MFG. CORP.
P. O. BOX 161—DEPT N. COLMAR, PA.

▲ For more details circle NED-1023 E5 on enclosed inquiry slip ▲

SAFE, EFFICIENT INDUSTRIAL CLEANING COSTS LESS---WITH NEW BENNETT UNIVERSAL AIR-OPERATED CLEANER!

The Bennett cleaner is safe because it is completely non-electrical. There is no danger from sparking, because there are no moving parts.

The Bennett cleaner saves *time and money!* It's light and highly portable. Cleans walls, shelves, beams, storage bins and other out-of-the-way surfaces with a minimum of labor.

Powerful suction developed by compressed air (approximately 90 lbs. pressure) adequate for all industrial applications. Highly efficient WET or DRY pickup.

Adaptable to any industrial application! Picks up metal chips, glass particles, etc. Interchanging bag with hose permits removal of liquids from any normal surface or tank.

Special fittings and brushes make the new Bennett cleaner adaptable to any industrial application. Interchanging bag with hose makes it adaptable for removal of liquids from any normal surface or tank.

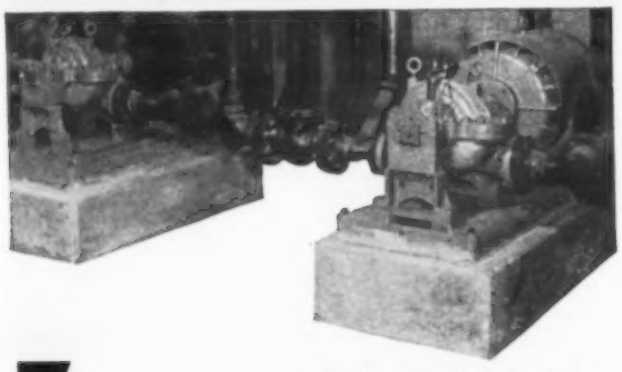
NO MOVING PARTS! Unlimited life . . . no danger from sparking.
COMPACT—POWERFUL! Highly efficient WET or DRY pick-up.
LIGHT—PORTABLE! Body of aluminum casting.
EASY TO OPERATE! Designed to reduce operator fatigue. Hand-operated metering valve.

COMPLETE UNIT WITH 5" ALUMINUM NOZZLE, AND BAG $29.95 EACH

NO ELECTRICAL CONNECTIONS NECESSARY!

M-M-A, Inc., Lancaster, Pa.

▲ For more details circle NED-1024 E5 on enclosed inquiry slip ▲



Two Goulds 2 x 3—9 Fig. 3305 two-stage centrifugal pumps on boiler feed service. These pumps are available in five sizes with capacities to 1200 GPM, heads to 1000 ft.

7 *design features*

improve pump operating efficiency

Every one of these features is *standard* with this new Goulds Fig. 3305 two-stage centrifugal pump:

1. Renewable stuffing box bushings.
2. Bearing housings sealed against moisture and dirt.
3. Cowl-type glands suitable for use with quenching liquids.
4. Stainless steel impeller keys.
5. Teflon water-seal rings.
6. Die-formed stuffing box packing.
7. Corrosion-resistant gland bolts.

Together, these seven construction features give you, without extra cost, a quality of service that's unique in general liquid-handling pumps.

Bulletin 722.6 gives the complete story of Fig. 3305 advantages, including specifications, performance curves, and interchangeability charts. *Write for a copy.*

Goulds PUMPS INC. Seneca Falls New York

Atlanta • Boston • Chicago • Houston • New York • Philadelphia • Pittsburgh • Tulsa

▲ For more details circle **NED-1025 E5** on enclosed inquiry slip ▲

Flowstrut Builds Storage Bins

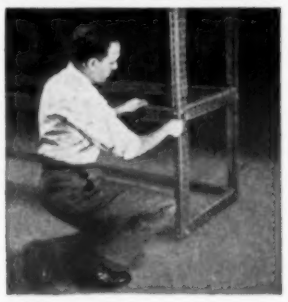


Table or trestle . . . workbench or warehouse . . .

BOLT it together swiftly, simply, economically!

FLOWSTRUT

WORLD PATENTS PENDING

UNIVERSAL SLOTTED ANGLE SYSTEM

STANDARD EQUIPMENT FOR YOUR INDIVIDUAL BUILDING NEEDS

BUILD DIRECTLY FROM YOUR ROUGH SKETCH —WITH ONLY A WRENCH AND A CUTTER!

40 pre-drilled bolt holes per foot; cutting marks at ¾" intervals eliminate detailed drawings and tedious measurements. Flowstrut needs no finishing; Bonderized baked gray enamel finish is weather- and rust-proof. Strong and sturdy Flowstrut-built units are completely salvageable! Expand or dismantle as requirements vary; Flowstrut stores compactly.

WRITE FOR DETAILED BULLETIN TODAY

Distributors' Inquiries Invited

FLOWSTRUT CORPORATION

137 East 44th St., New York 17, N. Y.

▲ For more details circle **NED-1026 E5** on enclosed inquiry slip ▲

LAY IT—FORGET IT!

ABSOLUTELY PERMANENT

ANCORETTE STEEL FLOOR PLATES

Positively no upkeep on the Immaculate Ancorette Die Cut Steel Floor Armor Panels. They are quiet, safe, easy on wheels and feet. Your own maintenance men can install them easily and at a low initial investment.

Ancorette Steel Floor Plates are the biggest dollar value in the entire industrial floor field and the most significant traffic and production aid in forty years.

ONLY **55¢** PER PLATE ONE SQ. FT.

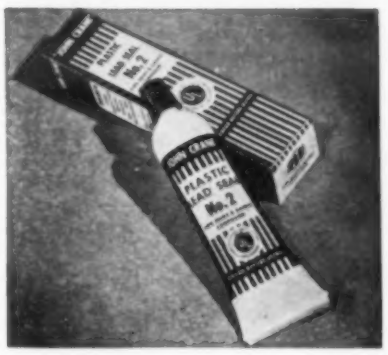
SEND FOR FREE INFORMATIVE LITERATURE

FLASH-STONE CO. DEPT. C 121 N. BROAD ST., RM. 806 PHILADELPHIA 7, PENNA.

▲ For more details circle **NED-1027 E5** on enclosed inquiry slip ▲

New Processes & Materials

PIPE THREAD COMPOUND packaged in crackproof plastic tube



Underwriters' approved Plastic Lead Seal pipe thread compound provides a permanent leakproof seal under a wide variety of applications and service conditions. It is nonhardening and withstands pressures up to 6000 psi, temperatures to 600° F and is insoluble in water, steam, gas, refrigerants, many chemicals and all petroleum products. Tube container is made of polyvinyl plastic that will not crack at the seams or separate at the bottom crimp. It will withstand constant squeezing and will not split or break when dropped. Friction type cap cannot become unscrewed. Made by **Crane Packing Co.**, Dept. NDC, 1800 Cuyler Ave., Chicago 13, Ill.

▲ For more details circle **NED-1028 E5** on enclosed inquiry slip ▲

SILICONE-RUBBER INSULATION for large motors and generators has resiliency of organic rubber

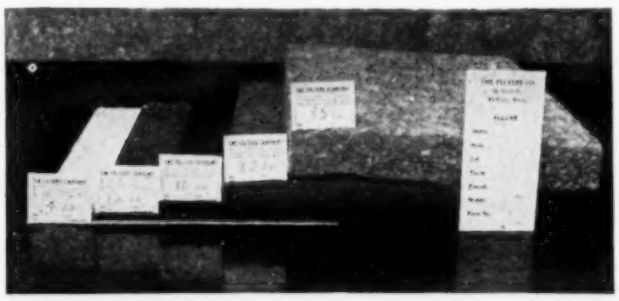
Using Dow-Corning Silastic silicone rubber as its basic material, Silco-Flex insulation for large motors and generators offers flexibility and resilience as well as outstanding thermal endurance and moisture resistance. Resiliency is illustrated in photo by bounce of hammer after blow on insulated test piece. In manufacture of stator coils, silicone rubber is applied to conductors and vulcanized into homogeneous mass by heat and pressure. Result is sealed, impervious dielectric barrier, continuous around coils and leads.

Insulation's dielectric and mechanical properties will not change with aging even at to 250° C. It also resists most atmospheric contaminants, corona and weathering, and withstands weak acids, alkalies and lubricating oils. Motors and generators incorporating Class H insulated form wound coils and Class A and B windings for certain service conditions are made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

▲ For more details circle **NED-1029 E5** on enclosed inquiry slip ▲

NONWOVEN FABRIC made of textile fiber and resin binder in wide range of densities

Cardable fibers such as wool, rayon, cotton, Dynel, nylon and Dacron, alone or in combination, can be used as the basic raw material in AllFab, a nonwoven



material. Fibers of different diameter, length and specific gravity can be combined and evenly distributed throughout the mass, permitting a very wide range of fiber combinations for specific purposes.

Material has a resin binder content which varies from 5 to 75 per cent and which widens the range of final forms still more. Uses include filler for vinyl coated materials, spacers, seals against dirt and dust, bumper to absorb shock, reservoir or wick for grease and oil, weatherproofing and wiping material. Initial thicknesses range from 1/16 to 2 in.; widths from 50 to 80 in. and multiples of these widths. Made by **Felters Co.**, Dept. NP, 210 South St., Boston 11, Mass.

▲ For more details circle **NED-1030 E5** on enclosed inquiry slip ▲

INSURE Proven Quality with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 Illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

S-306-AB Socket with Angle Brackets.

- Knife-switch socket contacts phosphor bronze, cadmium plated.
- Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 20 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

Jones HOWARD B. JONES DIVISION CINCH MANUFACTURING CORPORATION CHICAGO 24, ILLINOIS SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-1031 E5** on enclosed inquiry slip ▲

Streamliner 400 new & faster

This brand new, synchronized Ozalid Streamliner 400 handles continuous roll stock and cut sheets up to 42"... prints as fast as 24' per minute.

Big prints, low cost

The accustomed dependability of the Streamliner has been augmented by the newest engineering advances... more efficient mercury vapor lamp, with balanced cooling, synchronized jet developer, and convenient controls ... make the new 400 the best value in the lower priced whiteprint field.

Call the nearest Ozalid distributor *(see phone book)* for a demonstration. Or write 138 Ozaway, Johnson City, N. Y. In Canada, Hughes Owens Co. Ltd., Montreal.

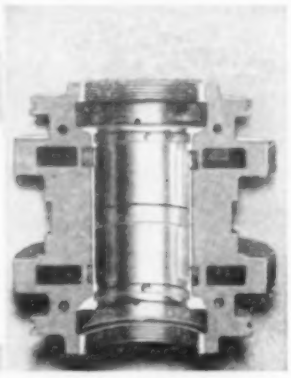
OZALID

A Division of General Aniline & Film Corporation ... *From Research to Reality*

Ozalid OZAMATIC *makes up to 1000 prints an hour, on materials as wide as 16"... can be operated by anybody.*

▲ For more details circle **NED-1032 E5** on enclosed inquiry slip ▲

FUSION
Bonded Babbitt-Lined Bearings
OFFER YOU A 3-WAY ADVANTAGE



. . . in Quality • Price • Delivery

PERFECTLY FUSED BOND . . . is one reason why you'll be more satisfied with FUSION Babbitt-Lined Bearings . . . in split or sleeve, load or thrust types — on cast iron, steel, bronze, aluminum or stainless steel backing. FUSION provides a permanent and inseparable bond — for good bearings that are stronger, wear longer, stand greater pressure and impact — and at *lower* cost.

Also complete line of Babbitt-Lined Oil Guards and Oil Seals.

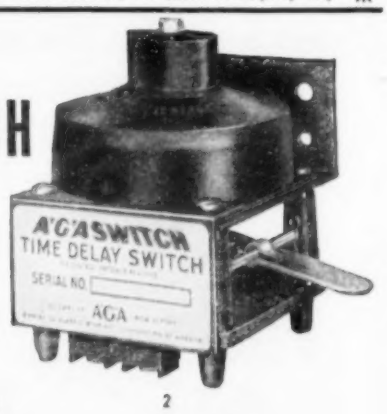
Write, or send blueprints for quotation — any size 1" to 60", any quantity.

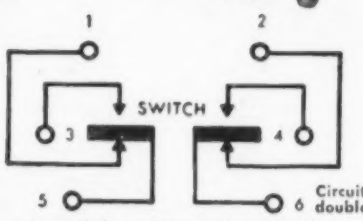
FBC

FUSION BEARING COMPANY
Industrial Bearings . . . Babbitt-Lined
3103 W. Walnut St., Milwaukee 8, Wis.

▲ For more details circle **NED-1033 E5** on enclosed inquiry slip ▲

NEW!
AGASWITCH
TRADEMARK
...to introduce time delays into electrical circuits





Circuit diagram, double pole unit

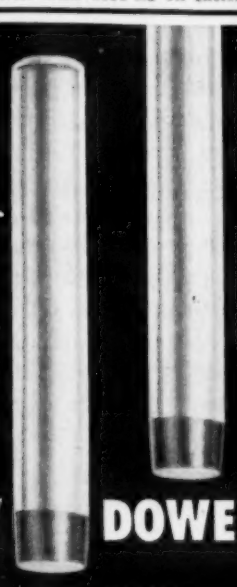
- Adjustable—time delays from 0.1 second to 5 or more minutes
- Manually operated, pneumatically timed
- Only 3½" x 2½" x 2½" overall
- Both single and double pole types
- Accurate, adaptable, compact and inexpensive

Write for details or application engineering assistance. Address Dept. A6-55.

AGA DIVISION — ELASTIC STOP NUT CORPORATION OF AMERICA
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing

▲ For more details circle **NED-1034 E5** on enclosed inquiry slip ▲

now... easier to stock and use!



DANLY DOWEL PINS

- 2 complete size ranges: standard and .001" oversize.
- Packaged for convenient storage, quick identification.
- Available in 10's, 20's, 50's or 100's.

WRITE FOR FREE BULLETIN TODAY. . . gives you complete data on the wide selection of diameters and lengths, prices and application information. Send for your free copy now!

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue • Chicago 50, Illinois

▲ For more details circle **NED-1035 E5** on enclosed inquiry slip ▲

New Literature & Catalogs

American Standards

American Standards Association—48-page 1955 edition of "American Standards" lists and indexes about 1500 American Standards. These include 210 for construction and civil engineering, 153 mechanical, 272 electrical, 158 safety, 165 textiles and wearing apparel, 251 photography and motion pictures, 74 petroleum products, 69 chemical, 62 metallurgy, 38 gas-burning appliances, 32 drawings and symbols, 18 mining, 11 rubber, 10 office equipment and miscellany of others.

▲ For more details circle **NED-1036 E5** on enclosed inquiry slip ▲

Fastener Engineering Data

National Machine Products Co.—24-page "Engineering Data Section" for company's catalog on standard and special hexagon nuts contains 14 topics relative to manufacturing techniques and proper installation. Complete information regarding all variables to be considered in relation to bolt tightness and wrench torques is covered as well.

▲ For more details circle **NED-1037 E5** on enclosed inquiry slip ▲

Zinc Phosphate Coatings

Oakite Products, Inc.—"How to Apply Zinc Phosphate Coatings to Steel in Preparation for Painting" is subject covered in 10-page brochure of this title. Booklet describes materials used in the Oakite Crys-Coat process to give paint-anchoring, corrosion-resisting coatings that usually weigh more than 200 milligrams per square foot of surface.

▲ For more details circle **NED-1038 E5** on enclosed inquiry slip ▲

Metallized Ceramic Coating

Frenchtown Porcelain Co.—Nicote, a metallized ceramic coating for use with both hard and soft solder, is described in illustrated 4-page bulletin 155. The firmly-bonded metal-to-ceramic coating presents a surface to which a metal part or other metallized ceramic parts can be soldered without special preparation. Application data, handling suggestions and chart of properties are included.

▲ For more details circle **NED-1039 E5** on enclosed inquiry slip ▲

Automatic Steam Boilers

Mears-Kane-Ofeldt, Inc. — Mkayo gas-fired automatic steam boilers, subject of 4-page illustrated bulletin No. 6H, are made in 1, 2, 3, 4 and 5-hp capacities for process work during seasons when main boiler capacity is not needed. Construction details, design features and general specifications are presented.

▲ For more details circle **NED-1040 E5** on enclosed inquiry slip ▲

Machine Tool Rebuilding Facilities

Miles Machinery Co.—Pertinent facts about this company's facilities for rebuilding machine tools are presented in an illustrated brochure. It describes how the used machines are dismantled and their many component parts rebuilt or replaced, then reassembled so that they are as good as new.

▲ For more details circle **NED-1041 E5** on enclosed inquiry slip ▲

Package Merchandising

Hinde & Dauch—"How to Merchandise with Corrugated Boxes" is a Little Packaging Library booklet which features points to remember in plotting a merchandising campaign. It discusses consideration of the product, of people who will buy it, methods of distribution and activities of competing firms as criteria for decisions on box design and color. It has 28 pages and four-color illustrations.

▲ For more details circle **NED-1042 E5** on enclosed inquiry slip ▲

Optical Measuring & Inspection

George Scherr Optical Tools Inc.—70-page illustrated catalog "Leitz Optical Measuring and Inspection Equipment" gives details and specifications on instruments and optical equipment of particular use in metalworking industries.

▲ For more details circle **NED-1043 E5** on enclosed inquiry slip ▲

Sintered Metal Filter

Permanent Filter Corp.—Hundreds of thousands of microscopically small spheres molded into a filtering wall, with countless passages formed between them, comprise the Filterall sintered metal filter. Described and illustrated in a 16-page brochure, filters are made in sizes from as small as ½-gpm to 600 gpm for handling a variety of fluids. Available units are detailed and specifications are given.

▲ For more details circle **NED-1044 E5** on enclosed inquiry slip ▲

General Plate
COMPOSITE CONTACTS

COMPOSITE STOCK

FABRICATED ASSEMBLIES

Composite Contact Material
that meets your requirements
Composite Contact Assemblies
that cut your costs!

There are many advantages for using General Plate composite contact materials, processes and facilities. Among the more important are better performance, longer operating life and lower fabricating costs.

But that's not all — here at General Plate you have a single source that can supply your contact requirements be it composite raw stock, contacts or complete assemblies.

General Plate Composite Contact Materials make it possible to manufacture complete contact assemblies to close tolerances by single blanking and forming operations. Compare this to other methods whereby the contacts and supporting members are fabricated separately and then assembled by brazing, welding or staking methods.

By letting General Plate fabricate your complete contact assemblies, you will save money, time and trouble . . . needless equipment cost and problems of scrap disposal are eliminated . . . contacts and/or contact assemblies made to your exact specifications are shipped to you ready for installation.

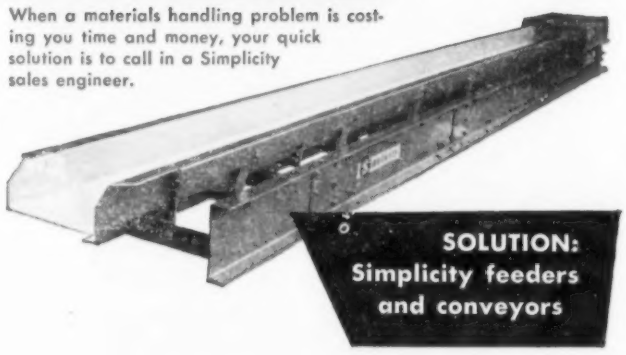
Write for complete information and Catalog PR700.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
85 FOREST ST., ATTLEBORO, MASS.

▲ For more details circle **NED-1045 E5** on enclosed inquiry slip ▲

PROBLEM: swift, efficient movement of materials

When a materials handling problem is costing you time and money, your quick solution is to call in a Simplicity sales engineer.


SOLUTION: Simplicity feeders and conveyors

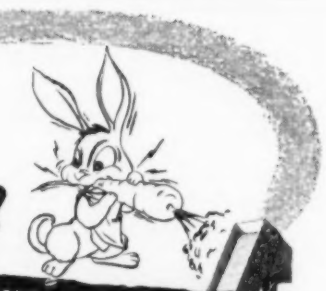
Food and chemical processing plants, foundries, mines and quarries all over the country are solving their materials handling problems with Simplicity equipment.

Whether you are handling hot foundry sand and castings or a frozen food product, there is a Simplicity conveyor and feeder designed for your purposes. Simplicity conveyors and feeders with one or two carrying surfaces will provide you with a steady product flow when you want it, where you want it.

Simplicity TRADE MARK REGISTERED 155
ENGINEERING COMPANY • DURAND 15, MICH.
FOR CANADA: SIMPLICITY MATERIALS HANDLING LIMITED, GUELPH, ONTARIO

▲ For more details circle **NED-1046 E5** on enclosed inquiry slip ▲

. . a feeding problem?

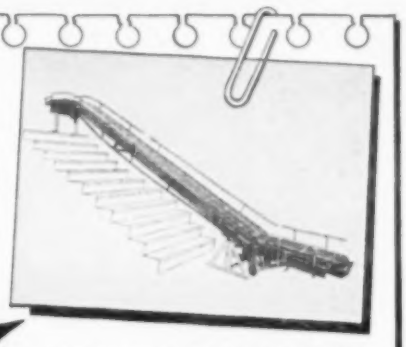


ARLIN CYBERNETIC CONTROL FLOOR HOPPER AUTOMATICALLY FEEDS PARTS AS NEEDED!

Arlin cybernetically controlled floor hoppers automatically feed a proper quantity of parts into successive equipment, usually one rotary hopper or a battery of machines. The flow of material is entirely controlled by the Arlin Cybernetic flow control. This electronic brain always measures the amount of material that is needed in the various hoppers which this floor hopper is feeding and makes the floor hoppers keep pace with the demand of parts at some other point in the plant. The electronic cybernetic control has the ability to think and is more than just a micro switch activated device or a contact acclimated device.

Arlin PRODUCTS, INC.
13541 AUBURN • DETROIT, MICHIGAN

▲ For more details circle **NED-1047 E5** on enclosed inquiry slip ▲



good idea!

CUT HANDLING COST UP TO 50% by "escalating" materials floor to floor with an ARR-O-VEYOR power belt unit. Moves the goods smoothly, continuously, up or down — saving time, money, effort and floor space. From receiving dock to second floor far corner, 1600 cases in 1½ hours! Combine it with Gravity Conveyor for complete conveyor system. Available in 12", 16", 20" or 24" belt widths, from 10' thru 40' in length, motors from ¾ HP thru 3 HP. Shipped as complete unit ready to install.

Full facts on all ARROW power and gravity conveyors. Write to:

arrow PRODUCTS, INC.
305 Arrow Bldg. 417 Front, N.W. Grand Rapids, Mich.

For more details circle NED-1048 E5 on enclosed inquiry slip

Eliminate Sweeping

During Polishing, Steelwooling and Sanding Operations

EASY TO USE!

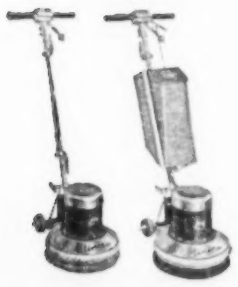
New UNICO

DRY-VAC

SWEEPS AS IT POLISHES!

New DRY-VAC attachment for Unico Machines does 2 jobs at the same time. For dry operations only. Vacuums dust and dirt and polishes floors in a single operation. Picks up ALL fine steelwool particles during steelwooling. No dust during disc sanding.

New UNI-VAC portable vacuum for wet and dry operations also available. Picks up water and soap solutions after scrubbing floors and rugs. Eliminates using brooms, mops, pails, wringers.



Floor Machines For Every Need

New Unico Floor Machines are packed with features that assure top efficiency, top value, lower operating costs. Simple and easy to use. Unequalled for scrubbing and polishing all types of floors. Quickly converted for all wet scrubbing operations. Shampoos rugs and carpets right on the floor. Interchangeable attachments permit waxing, sanding, buffing, steelwooling, all with the same machine. In 12", 13", 15", 17" and 20" brush sizes. Send for details now!

UNITED FLOOR MACHINE CO., Inc.
7719 South Chicago Ave., Chicago 19, Ill.

For more details circle NED-1049 E5 on enclosed inquiry slip

this is important enough to read twice!

Now, *for the first time*, you can obtain 1, 2, or a dozen prototype *high alumina ceramic* parts for development work in your own plant . . . at low cost.

This new service is available to "custom-make" any small-lot number of Frenchtown *engineered* ceramic parts to your exacting specifications. Here's an opportunity to put these look-ahead materials "through the mill" to help solve a materials problem for new or existing products, without the barrier of buying production run quantities. Want to know more? Write, outlining your problem. Ask, too, for a copy of our 4-page bulletin which describes the complete line of Frenchtown *engineered* ceramics.

frenchtown PORCELAIN COMPANY
97 Muirhead Avenue • Trenton 9, New Jersey
California Representative: Edwin E. Starr, 4101 Rhodes Ave., North Hollywood, California, STanley 7-5879.

For more details circle NED-1050 E5 on enclosed inquiry slip

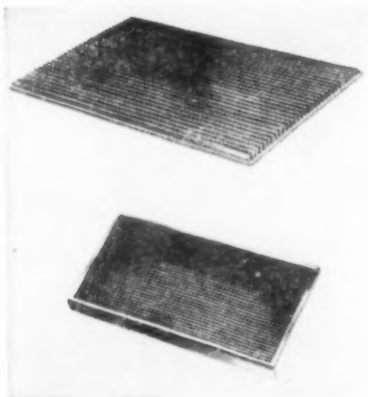
New Processes & Materials

MAGNETIC PLASTIC MATERIAL
for core, filter and attenuator use

High temperature stability, high impact strength and excellent machinability are characteristic of Ferrotron type 119 magnetic plastic material for use as cores, filters and attenuators in high frequency applications. Material resists heat up to 200° C and will maintain its high impact strength at as low as −100° C. Constant magnetic permeability with frequency through 15 megacycles is another characteristic. Material is relatively unaffected by frequency in low megacycle range, or by long exposure to maximum heats. Magnetic loss tangent is extremely low. Slugs are available in sizes from ½ to 2 in. OD by 1 in. long. Developed by **Poylmer Corp.**, 438 Walnut St., Reading, Pa.

For more details circle NED-1051 E5 on enclosed inquiry slip

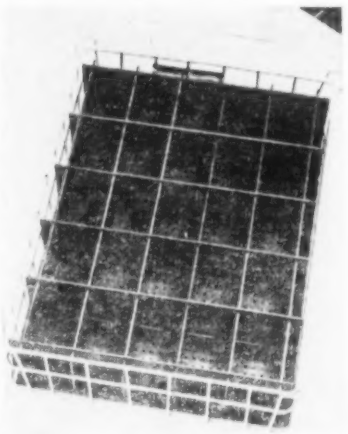
RUBBER FLOOR MATS & TREADS
provide wiping and cushioning action



High slip resistance, good wiping action and ease of cleaning are features of EverKleen heavy duty all-rubber floor mats and stair treads. Bottom surface is grooved to prevent slippage. They are usable as door mats, safety mats and as fatigue-reducing pads for people who must stand while working. They are offered in black rubber in 16 x 24-in. and 20 x 30-in. sizes. Stair treads measure 9 x 18 in. and can be supplied in black or brown. Made by **Monarch Rubber Co.**, 260 Lincoln Park, Hartville, O.

For more details circle NED-1052 E5 on enclosed inquiry slip

DEGREASING BASKET INSERTS
prevents parts touching metal



Removable bottoms and divider inserts for wire parts degreaser baskets are made of Masonite Tempered Presdwood to prevent parts from coming in contact with metal. Bottoms are perforated and dividers are slotted to fit together to form an "egg crate" grid. Divider strips have slots cut in various positions so that compartments can be assembled in various sizes. Material available from **Masonite Corp.**, Suite 2039-N, 111 W. Washington St., Chicago 2, Ill.

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indicate acidity or alkalinity

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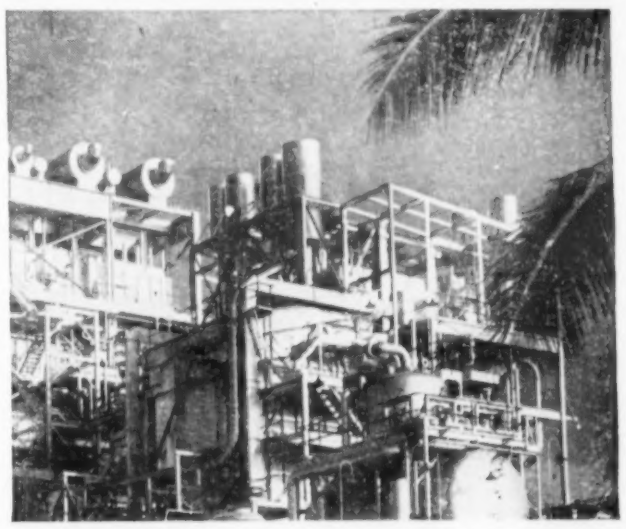

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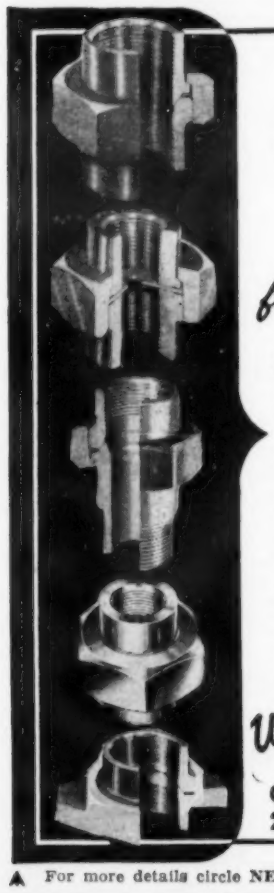

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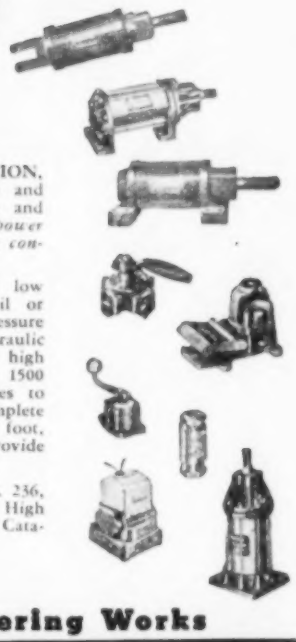

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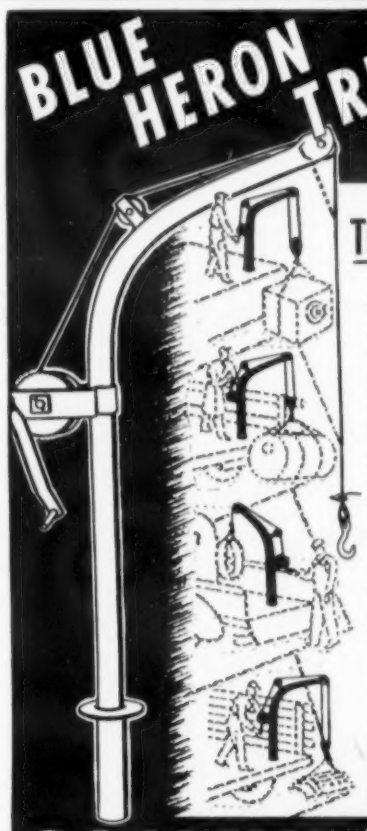

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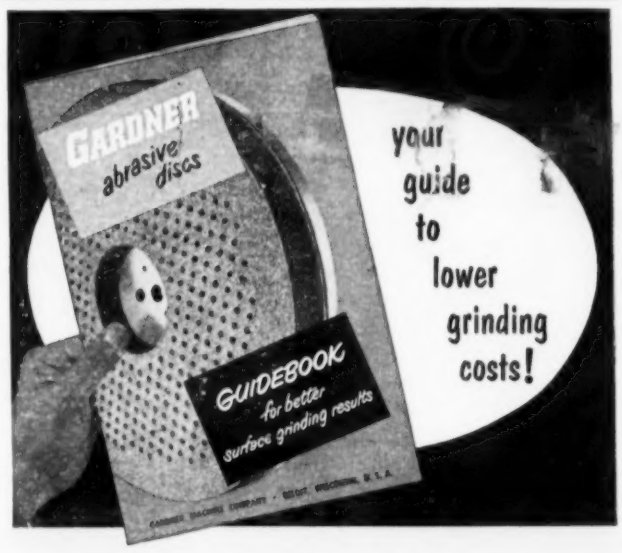

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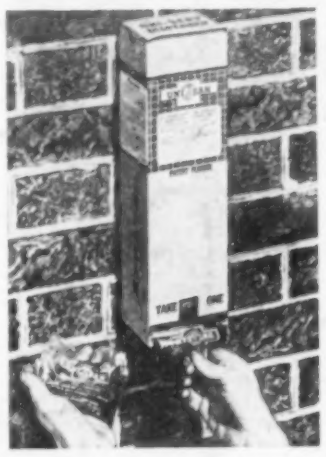

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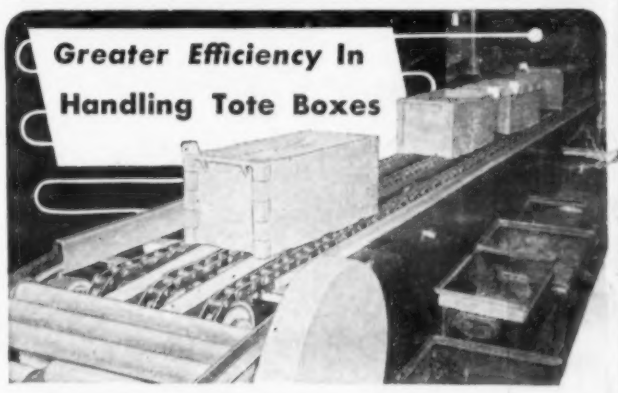

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